

Bradshaw Mountain R. id
(Crown King Branch)

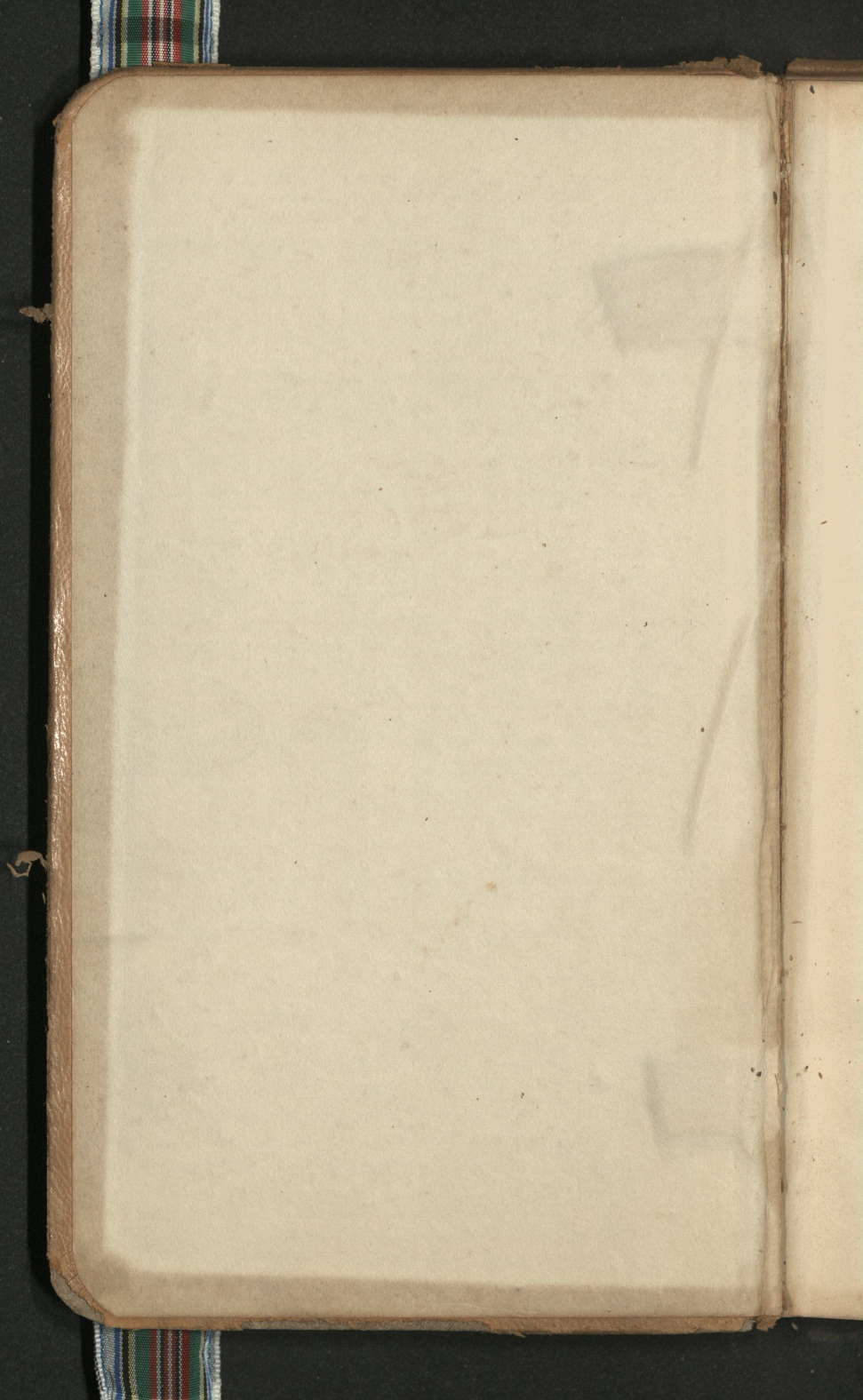
Bridges 1-31

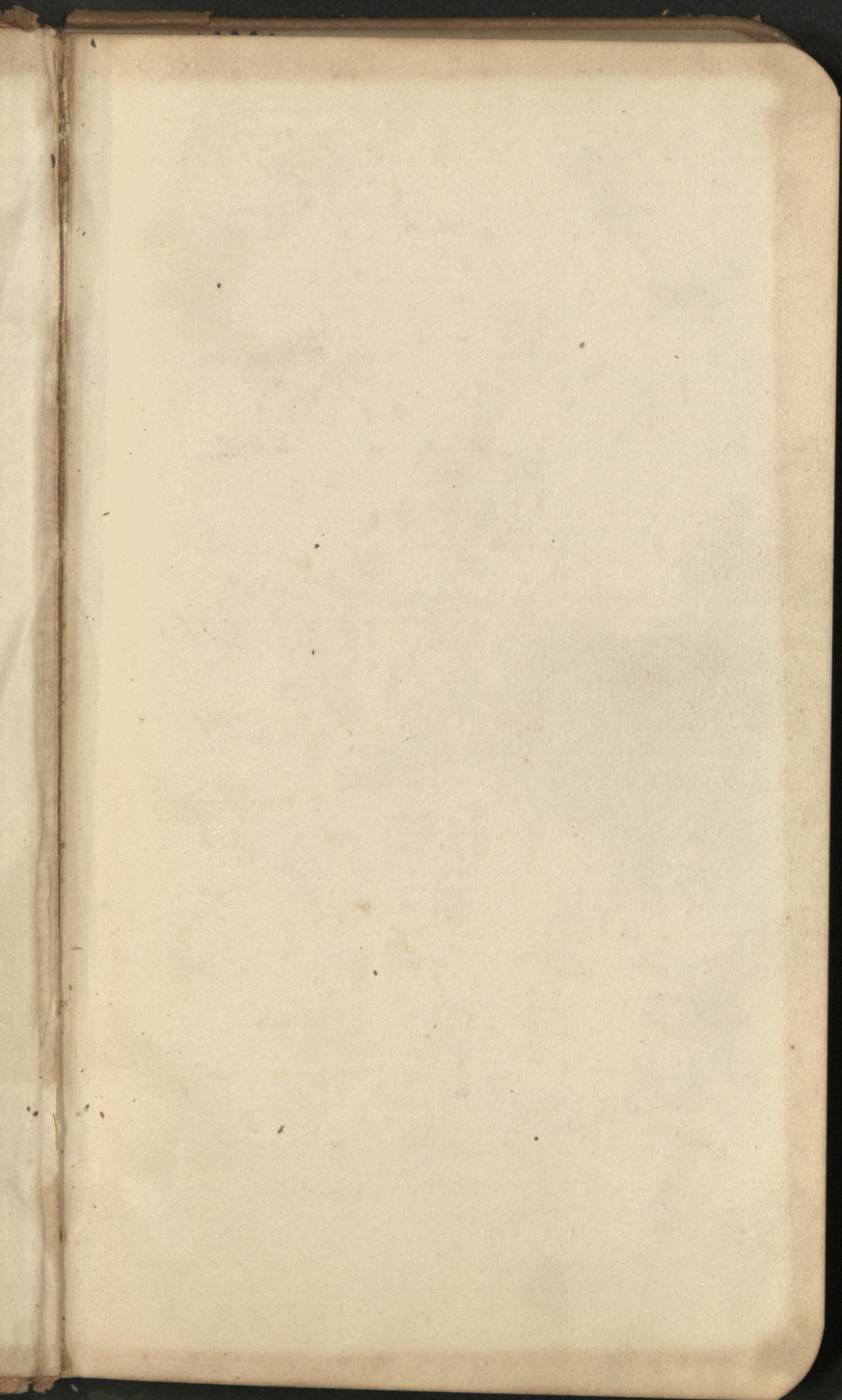
Record - Bill of Material, Cost and other
data —

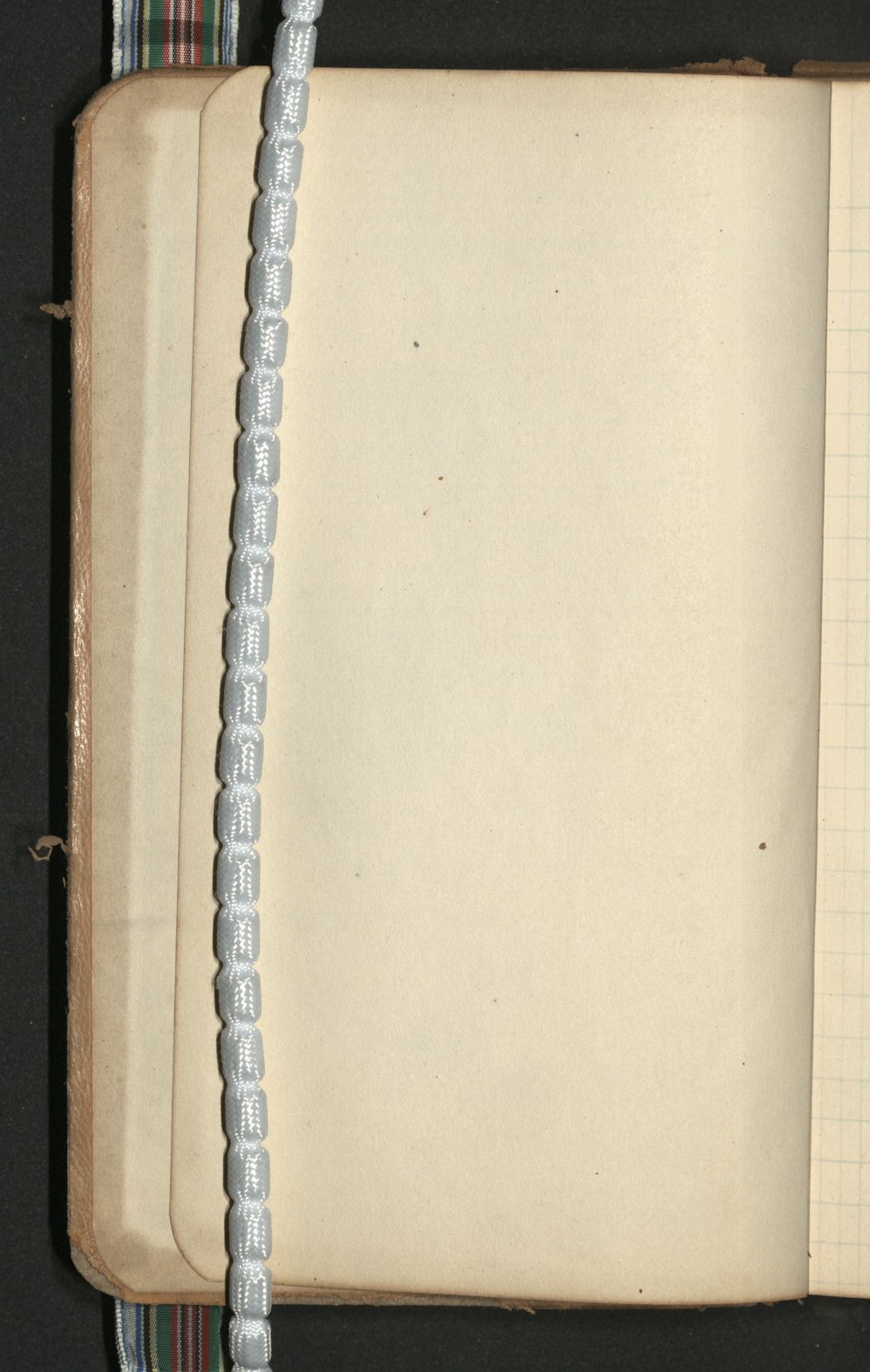
FIELD BOOK.

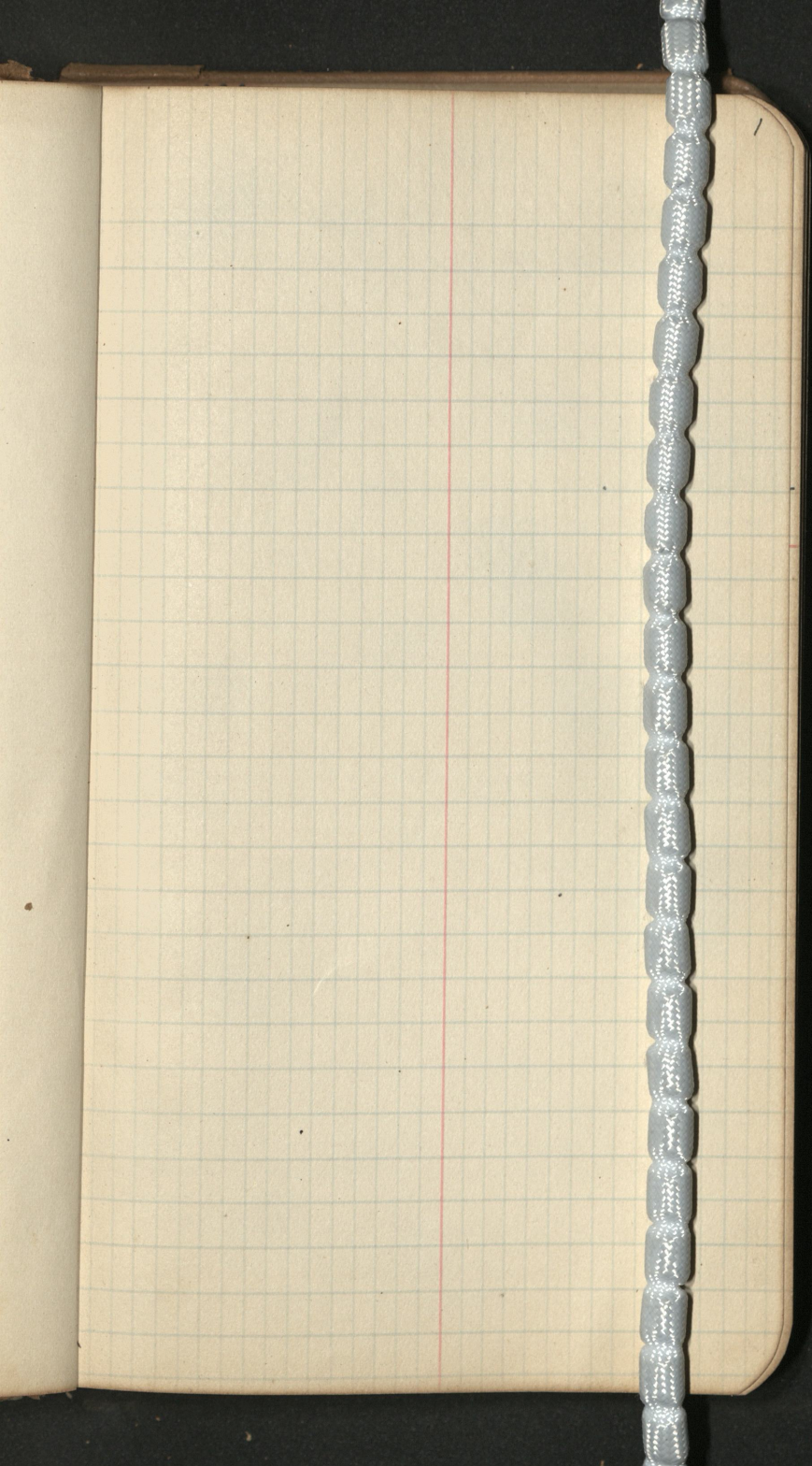
403.

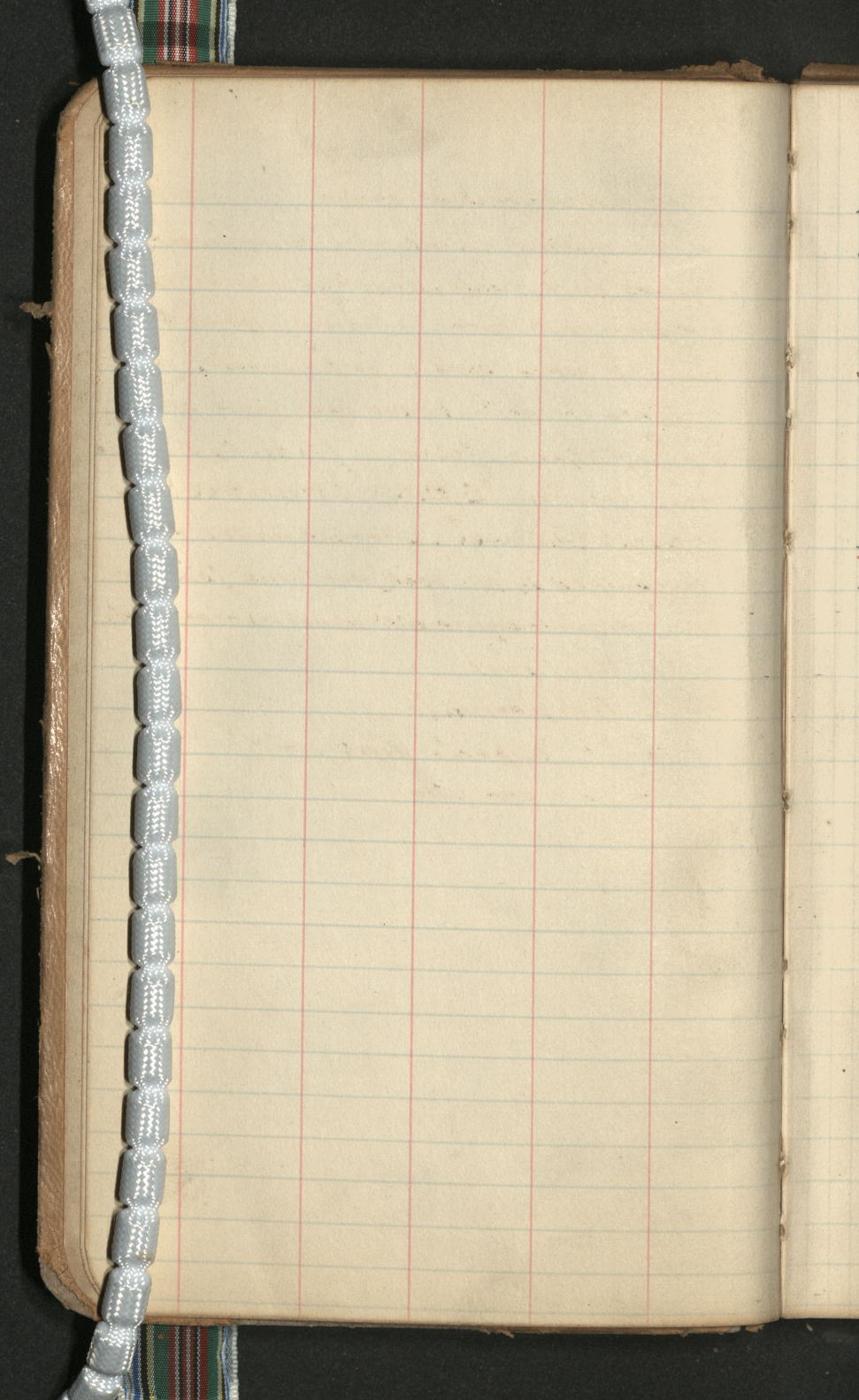
60 - B6







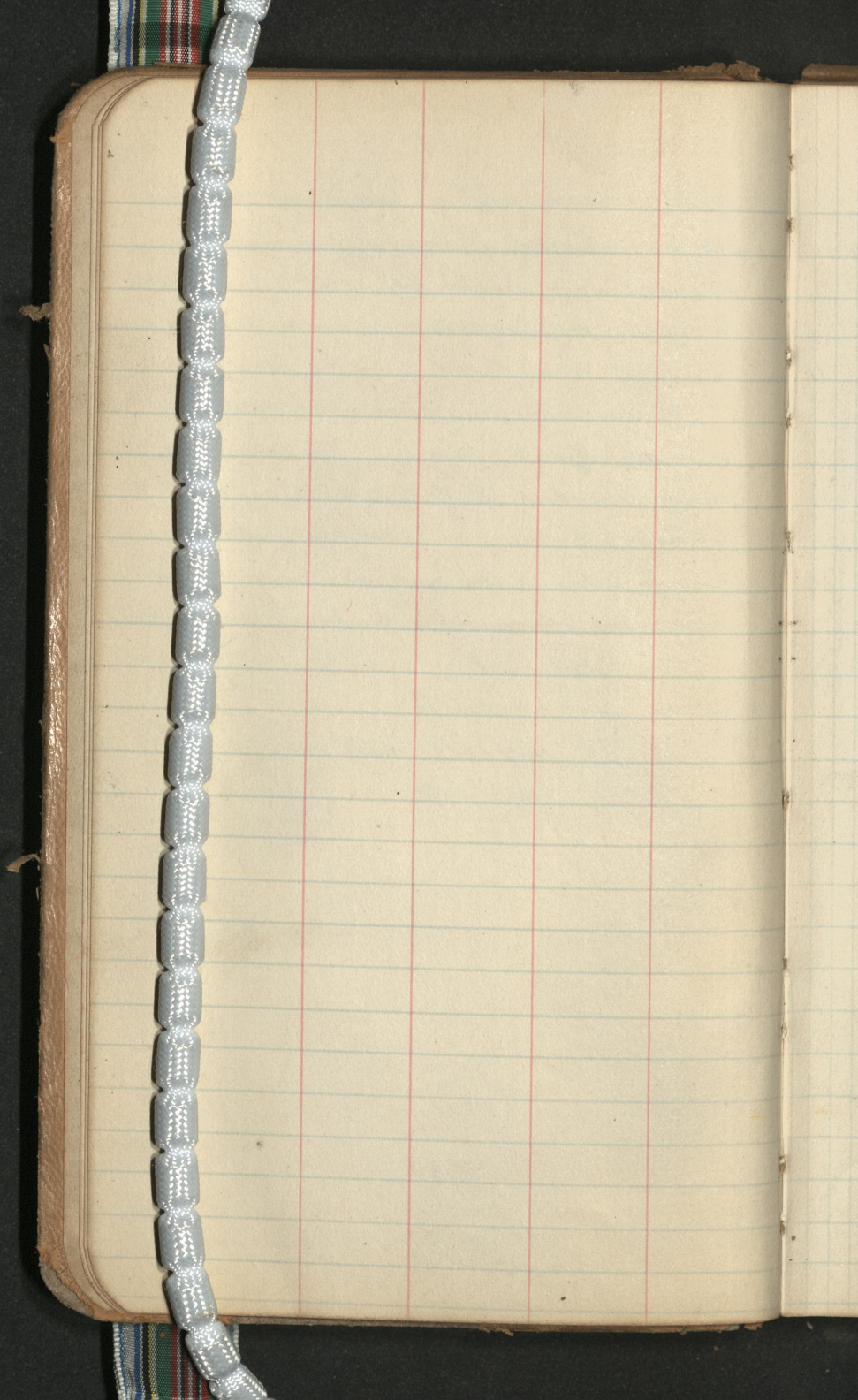




Note:— When cost of bridges in this book were computed, no record of miscellaneous charges were made. Hence at a later date, to agree with auditors figures, the costs in this book were found to be too small.

These corrections have been made and are on sheets, found in file box in drafting-room, marked "B. M. R. R. & Prescott & E. R. R. Bridges & Buildings". Likewise under each bridge, listed in this book, are found following corrections to agree with above named sheets

- 1 Total cost
- 2 Cost per lin. ft.
- 3 " Carpenter work per 'M'
- 4 " per pile



BRIDGE #1

Bent.	Station	Deflect'n	Elev. Grade	Grade to Surface	Piles	Posts	Sills
1	76+60		30.35		3-14		
2	76+74		30.48		4-24		
3	76+88		30.62	14.0	4-12	4-16	1-
4	77+02		30.76	28.0		2-25 2-28	1-
5	77+16		30.90	37.0		4-24 4-12	1-
6	77+30		31.04	40.0		4-21 4-16	1-
7	77+44		31.18	36.0		4-24 4-16	1-
8	77+58		31.32	27.2	4-12	4-24	1-
				18.0			

Bent	Station	Elev. Grade	Ground to Grade	Piles	Posts	Sills
1	76+60	4331.74		3-16'		
2	+74	31.60		4-22'		
3	+88	31.46	18.0	4-16'	4-14	1-22
4	77+02	31.32	27.0	4-12'	4-24	1-26
5	+16	31.18	36.0		{4-16 4-24	{1-26 1-34
6	+30	31.04	40.0		{4-16 4-24	{1-26 1-34
7	+44	30.90	37.0		{4-12 4-24	{1-26 1-32
8	+58	30.76	28.0		{2-26 2-28	1-28
9	+72	30.62	14.0	4-12'	4-16	1-22
10	+86	30.48		4-24'		
11	78+00	30.34		3-14'		

Station 76+60 to 78 —

4

Posts	Sills	Piles in Ground				Piles
		1	2	3	4	
		5.2	5.2	4.0	7.8	12"x12"
		11.5	10.3	9.0	9.6	Oregon
						Oregon
4-16	1-22	3.5	4.5	4.0	3.3	"
2-25						
2-28	1-28					
4-24	1-26					
4-12	1-32					
4-21	1-26					
4-16	1-34					
4-24	1-26	0	0	0	0	
4-16	1-34	3.2	4.5	4.0	4.0	
4-24	1-26					

Sills	Piles in Ground				Piles
	1	2	3	4	
	9.8 ^N	8.2 ^O	9.3 ^N		
	13.0 [□]	10.0 [□]	12.0 [□]	15.2 [□]	
1-22	14.2 [□]	11.0 [□]	14.5 [□]	11.5 [□]	
1-26	9.0 [□]	9.6 [□]	9.7 [□]	9.8 [□]	
1-34	3.2 [□]	4.5 [□]	4.0 [□]	4.0 [□]	
1-26					
1-34					
1-26					
1-32					
1-28					
1-22	3.5	4.5	4.0	3.3	Oregon
	11.5	10.3	9.0	9.6	"
	5.2	4.0	7.8		12x12 O.

BRIDGE #1

BILL OF MATERIAL AND COST

Mtl. Ps.	Size	L	BM.	Kind	Rate	Amount	Total Amt.
Piling	3	24		OP. SH.	.10		
"	1	18		"	"		
"	8	12		"	"		
"	4	16		"	"		
Lumber (piling)	3	12X12	14	504	"	16.00	
"	4	12X12	22	1056	"	"	
"	1	12X12	18	216	"	"	
"	1	12X12	8	96	"	"	
"	1	12X12	10	120	"	"	
"	2	12X12	9	216	"	"	
Lumber		12X12	12	192	"	"	
		4X10	650	2167	"	"	
25		3X10	20	1250	"	"	
59		6X8	16	3456	"	"	
20		6X6	16	960	"	"	
98		6X8	9	3528	"	"	
30		7X16	30	8400	"	"	
1		7X16	15	140	"	"	
		12X12	310	3920	N.P.	15.30	56.92
38		6X12	4	912	RW. SH.	16.00	14.59
							645.33
							\$645.33

98-6x8x9 1/2 in

Mile 27.45 from P + E Junction.

5

Length 140.0'

Height 40.0'

tal
mt.

Iron Pcs.	Wt.	Rate	Amt	Total Amt.
64 Bolts (S.H.) $\frac{5}{8} \times 33"$	192	.01		
62 " " $\frac{3}{4} \times 30"$	248	"		
146 " " $\frac{3}{4} \times 18"$	365	"		
28 " " $\frac{3}{4} \times 21"$	78	"		
128 Spools " 4"	768	"		
600 Washers " $\frac{3}{4}"$	840	"		
80 Drifts " $\frac{3}{4} \times 20"$	240	"		
36 Dowels " 1 x 8"	61	"		
Bt. Spikes " $\frac{1}{2} \times 10"$	100	"		
" " (new) $\frac{3}{8} \times 8"$	50	.036	1.80	
Nails 60°	40	.033	1.32	

645.33

33.12
28.92

36.24
32.04

Cost Material — 677.37

Labor — Pile Driving — 138.28

Teaming — 98.08

Carpenter 308.09 544.45

Total Cost — 1226.02

Cost per lin. ft. \$8.75 \$9.88

Cost of Carp. per M. \$7.91 ok.

Nº Piles — 16 —

Cost per pile \$8.64 ok.

5.33

5.33

Note — See note on Page 2

BRIDGE #2 -

Bent	Station	Elev. Grade	Piles	Posts	Sills
1	144+76	4391.12	3-22		
2	+90	4391.07	4-24		
3	145+04	4391.03	4-14	4-14	1-22
4	+18	91.00	4-12	4-24	1-26
5	+32	91.00	4-14	4-24	1-26
6	+46	91.00	4-14	4-24	1-26
7	+60	91.00	4-10	4-24	1-26
8	+74	91.00	4-8	4-24	1-26
9	+88	91.00	4-12	4-14	1-22
10	146+02	91.00	4-23		
11	+16	4391.00	3-22		

680

Station 144+76 to 146+16

6

11s

Piles in Ground

	1	2	3	4	
	[□] 15.0	[□] 19.5	[□] 16.4		
	[□] 10.9	[□] 14.3	[□] 15.2	[□] 15.0	
22	[□] 11.5	[□] 11.8	[□] 10.3	[□] 10.5	
26	[□] 6.2	[□] 5.4	[□] 5.8	[□] 4.8	
26	[□] 4.4	[□] 3.4	[□] 3.4	[□] 3.7	[□] 4.0
26	[□] 2.5	[□] 4.6	[□] 4.4	[□] 3.5	
26	ND 6.1	ND 6.0	ND 6.0	ND 5.8	
26	ND 6.0	ND 6.5	ND 7.5	ND 7.5	
22	[□] 10.0	[□] 7.4	[□] 7.9	[□] 7.8	
	[□] 9.2	[□] 10.0	[□] 11.5	[□] 9.0	
	[□] 18.3		[□] 12.8	[□] 18.8	

Over
Hackberry Wash.

BRIDGE #2

BILL OF MATERIAL

Mtl.	P.S.	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
Piling	1		24		O.P.	.10	7.20	
	4		12		"	"		
	6	12X12	22	1584	OP.S.H.	16.00	76.03	
	7	12X12	24	2016	"	"		
	8	12X12	12	1152	"	"		
Timber	2	12X12	24	576	Tr'd. R.	15.30	41.86	
	10	12X12	18	2160	"	"		
	7	12X12	10	480	NP.S.H.	6.50	3.12	
	8	12X12	15	1440	OP.S.H.	16.00	477.70	
	6	12X12	14	1008	"	"		
	2	12X12	16	384	"	"		
	30	7X16	30	8400	"	"		
	20	6X6	16	960	"	"		
	52	6X8	16	3328	"	"		
	98	6X8	16	6272	"	"		
	8	12X12	14	1344	"	"		
	20	12X12	26	6240	"	"		
	2	12X12	20	480	"	"		
	6	2X12	16	192	N.P.	12.80	2.46	608.37

38016 ✓

105 6X8X9Tees

Mile
from
AND
Mtl.

Iron

Lo

Mile 28.75
from P & E Junction

Height 32.0'

7

AL
Total
Amt.

AND COST

Length 140.0'

Total
Amt.

\$608.37

Mtl.	Pcs.	Kind	Wt.	Rate	Amt	Total Amt.
Iron	70	Bolts S.H. $\frac{5}{8} \times 33"$	210			
	68	" " $\frac{3}{4} \times 30"$	272			
	176	" " $\frac{3}{4} \times 18"$	440			
	201	" " $\frac{3}{4} \times 21"$	563			
	78	Drifts " $\frac{7}{8} \times 20"$	234	36.11 # @.01	36.11	
	650	Washers " $\frac{3}{4}"$	910			
	140	Spools " 4"	810			
	48	Dowels " 1" x 8"	82			
		Bt. Spikes 10"	40			
		" " new $\frac{5}{8} \times 8"$	50	90	3.33	
		Nails 60°	40			39.44

3901 36.11
Cost Material — \$647.81

Labor — Teaming — \$115.71
Pile Driving — 162.35
Carpenter — 243.50 521.56

Total Cost — \$1168.37

Cost per lin. ft. — \$8.35 9.48 \$1327.57

Cost of Carp. per M. — \$6.41 O.K.

N° Piles — 42 —

Cost of driving 1 pile — \$3.87 O.K.

Note — See note of Page 2

BRIDGE #3-

Bent	Station	Defl'n	Grade	Piles	Posts	Sill
1	307+07 $\frac{1}{2}$	0° 00'	4199.62	3-16		
2	+21 $\frac{1}{2}$	1° 09 $\frac{1}{2}$ '	99.22	4-26		
3	+35 $\frac{1}{2}$	2° 14 $\frac{1}{2}$ '	98.82	4-22	4-14'	1-22
4	+49 $\frac{1}{2}$	3° 21'	98.42	4-12	4-24'	1-26
5	+63 $\frac{1}{2}$	4° 29'	98.02	4-14	4-24'	1-26
6	+77 $\frac{1}{2}$	5° 36 $\frac{1}{2}$ '	97.62	4-12	4-24'	1-26
7	+91 $\frac{1}{2}$	6° 44'	97.22	4-10	4-24'	1-26
8	308+05 $\frac{1}{2}$	7° 51'	96.82	4-10	4-24'	1-26
9	+19 $\frac{1}{2}$	8° 58 $\frac{1}{2}$ '	96.42	4-18	4-14'	1-22
10	+33 $\frac{1}{2}$	10° 06'	96.02	4-24		
11	308+48	11° 13'	4195.62	3-16		

- 2.86 ±

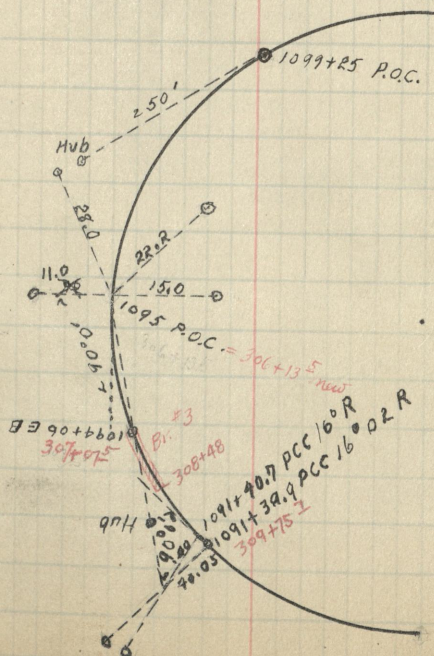


Station 307+07.5 to 308+48-

8

posts Sills Piles in Ground

		1	2	3	4	5	6
		18.0	18.0	18.0			
		25.0	23.8	24.0	23.6		
14'	1-22	14.9	18.8	21.0	20.5		
24'	1-26	8.6	8.8	9.2	10.3		
24'	1-26	6.0	6.0	6.0	6.0	5.5	5.3
24'	1-26	7.0	7.3	8.0	7.0	6.0	7.7
24'	1-26	6.2	6.0	6.0	8.0	5.8	5.4
24'	1-26	5.7	8.0	7.7	5.2		
14'	1-22	13.0	12.0	13.3	12.0		
		14.0	17.0	21.6	18.0		
		16.0	16.0	16.0			



BRIDGE #3

Mile 31.82 from P+E Junction. Height 33' Length 140'

Material	Lin. ft.	Ft. B.M.	Kind	Rate	Amount	Total Amt.	Mt.
Piling	121		O.P. SH.	.10	12.10		Piling
	342		O.P.	.33 $\frac{3}{4}$	115.42		X
	287		N.R. trtd	.156	44.97	172.29	

Timber	22654		O.P. SH.	16.00	362.46		
	240		N.R. trtd	15.30	3.67		
	512		N.R.	12.80	6.55		
	6516		O.P.	25.20	164.20	536.88	
	29922						

Iron	Kind	Wt.	Rate	Amt.	
"	Wrought	1243 (SH)	.01	12.43	
"	"	95 new	.032	3.04	
"	"	60 "	.037	2.22	
"	Cast	1920 (SH)	.01	19.20	36.89
		3318			
Cost Material					746.06

Labor — Pile Driving —	180.25	
Carpenter —	228.10	
Teaming —	171.17	579.52

Total Cost — ~~\$1325.58~~
1483.78

Cost per lin. ft. — ~~\$9.40~~ 10.59

Cost of Carp. per M. — ~~\$7.62~~ ok.

Nº Piles — 42 —

Cost of driving 1 pile — \$4.29 ok.

Note — See note on Page 2

33'
140'

Total
Amt.

X

BRIDGE #3

X 9

BILL OF MATERIAL AND COST (itemised).

	Mtl.	Size	L'th.	Ft.	BM.	Kind	Rate	Amt.	Total Amt.
Piling		121				O.P.S.H.	0.10	12.10	
X		342				O.P.	$0.33\frac{3}{4}$	115.42	X
172.29		287				N.P.tr'd	0.156	44.77	172.29

— see opp. page —

536.88

36.89

246.06

29.52

25.58

33.78

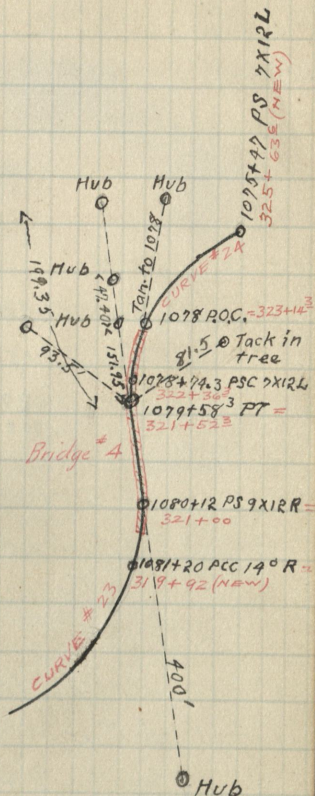
BRIDGE #4 —

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	S
1	320 + 53	4156.09	4154.10	3-18'		
2	+67	55.64	45.0	4-24'	4-8'	1-
3	+81	55.19	34.1	4-22'	4-18'	1-2
4	+95	54.74	12.5	4-22'	4-24'	1-2
5	321 + 09	54.28	10.7	4-14'	4-24'	1-3
6	+23	53.79	10.5	4-10'	4-14'	1-2
7	+37	53.30	10.2	4-10'	4-24'	1-3
8	+51	52.81	09.9	4-10'	4-14'	1-2
9	+65	52.35	09.4	4-10'	4-24'	1-3
10	+79	51.89	08.8	4-10'	4-14'	1-2
11	+93	51.43	08.5	4-12'	4-24'	1-3
12	322 + 07	50.97	05.2	4-14'	4-14'	1-2
13	+21	50.51	05.1	4-14'	4-24'	1-3
14	+35	50.05	07.6	4-10'	4-14'	1-2
15	+49	49.62	12.0	4-10'	4-24'	1-3
16	+63	49.19	20.5	4-10'	4-24'	1-2
17	+77	48.76	29.0	4-10'	4-18'	1-2
18	+91	48.33	37.5	4-18'		
19	323 + 05	4147.90	4146.9	3-10		

Station 320+53 to 323+05

10

Posts	Sills	Piles in Ground			
		1	2	3	4
		17.8	18.0	14.5	
4-8'	1-18'	22.7	20.8	20.1	17.3
4-18'	1-24'	18.7	19.8	21.4	19.8
4-24'	1-26'	17.3	17.0	16.8	14.8
4-24'	1-32'	13.0	10.0	8.1	10.8
4-14'	1-26'	9.8	9.0	9.0	7.2
4-24'	1-34'	7.3	7.3	6.9	6.7
4-14'	1-26'	7.3	6.6	6.8	6.6
4-24'	1-34'	6.7	6.3	6.3	6.0
4-14'	1-26'	7.3	6.9	6.5	6.8
4-24'	1-34'	7.3	6.8	7.0	5.3
4-14'	1-26'	6.6	6.3	5.5	5.7
4-24'	1-34'	5.3	6.0	3.7	6.0
4-14'	1-26'	7.6	4.9	5.2	4.0
4-24'	1-34'	3.7	5.2	4.0	4.0
4-10'	1-26'	3.2	3.2	3.6	3.2
4-24'	1-24'	4.5	5.2	5.2	5.4
4-18'		8.0	7.0	5.6	8.0
		7.0	6.4	9.5	



BRIDGE #4 — Height 47'

Mile 32.08 from P & E Junction. Length 252.7'

Material	Lin. ft.	Ft. B.M.	Kind	Rate	Amount	Total Amt.
Piling	927		O.P.	.3325	312.86	312.86

Timber		66028	O.P.	16.00	1056.45	
--------	--	-------	------	-------	---------	--

"		6168	O.P.	25.20	155.43	
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"		11098	N.P.	12.80	142.05	1353.93
---	--	-------	------	-------	--------	---------

Iron	Kind	Wt.	Rate	Amt.
"	Wrought	3028 (SH)	.01	30.28

"	"	150	.037	5.55
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"	Cast	4270 (SH)	.01	42.70	78.53
---	------	-----------	-----	-------	-------

7448

Cost Material — \$1745.32

Labor — Driving Piles — 325.00

Carpenter — 545.05

Teaming — 337.23 1207.28

Total Cost — \$2952.60

3263.78

Cost per lin. ft. — \$11.67 12.90

Cost of Carp. per M. — \$6.54 OK

Nº Piles — 74 —

Cost of driving 1 pile — \$4.40 OK

Note — See note on Page 2

st 47'

th 252.7'

Total
Amt.

312.86

1353.93

78.53

745.32

1207.28

2952.60

263.78

11

BRIDGE #5—

Bent	Station	Deflectn		Elev.	Elev.	Piles	Po
		from P.T.					
		6° C.R.		Grade	Ground		
1	344+49	8° 52'	4076.05			3-14'	
2	+63 ⁵	8° 26'	75.58	66.0	4-24'		
3	+77 ⁵	8° 00'	75.12	58.0	4-16'	4-	
4	+91 ⁵	7° 35'	74.66	51.5	4-10'	4-	
5	345+05 ⁵	7° 10'	74.20	50.9	2-10'	2-	
6	+19 ⁵	6° 45'	73.74	47.4		4-	
7	+33 ⁵	6° 20'	73.28	47.0		4-	
8	+47 ⁵	5° 54½'	72.83	46.3	4-10'	4-	
9	+61 ⁵	5° 29'	72.38	51.6	4-10'	4-	
10	+75 ⁵	5° 04'	71.92	63.0	4-16'	4-	
11	345+90	4° 38'	4071.45			3-14'	

Station 344+49 to 345+90

12

Piles	Posts	Sills	Piles in Ground			
			1	2	3	4
3-14'			14.0	11.0	12.6	
4-24'			13.2	13.0	12.7	13.1
4-16'	4-12	1-20	9.6	10.2	9.9	10.4
4-10'	4-18	1-24	4.3	4.6	5.0	5.2
2-10'	2-20	1-24			4.5	5.0
	2-26					
	4-30	1-30				
	4-30	1-30				
4-10'	4-30	1-30	4.0	4.3	5.5	6.0
4-10'	4-20	1-24	4.0	5.6	5.7	6.8
4-16'	4-8	1-18	13.7	14.2	14.7	15.2
3-14'			12.5	13.5	11.8	

Started work 8/3/02.

Finished " 8/12/02.

BRIDGE #5

Mile 32.54 from P & E Junction.

Height 26'

Length 141.5'

Material	Lin. Ft.	Ft. B.M.	Kind	Rate	Amount	Total Amt.
Piling	387		O.P.	.3375	130.61	130.61
Timber		1536	N.R.d	15.30	23.50	
"		278	N.P.	12.80	3.56	
"		1056	R.W.	22.50	29.04	
"		648	R.W.SH	16.00	10.37	
"		26899	O.P.SH	16.00	430.38	
"		3456	O.P.	25.20	87.09	583.94
Iron	Kind	Wt.	Rate	Amt.		
"	Wrought	1516 SH.	.01	15.16		
"	"	55 (nails)	.037	2.04		
"	"	50	.032	1.60		
"	Cast	2080	.01	20.80	39.60	

Cost Material — \$754.15

Labor — Driving Piles — 104.12

Carpenter — 245.60

Teaming — 175.81 525.53

Total Cost — \$1279.68

Cost per lin. ft. — \$9.01 10.44

Cost of Carp. per M. — \$7.25 O.K.

Nº Piles — 32 —

Cost of driving 1 pile \$3.25 O.K.

Note — See note of Page 2

5'
41.5'
Total
Amt.
130.61

13

583.94

39.60

754.15

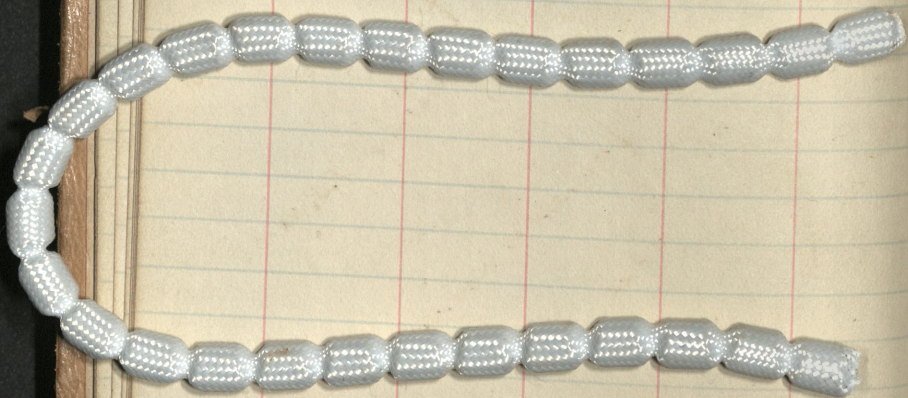
525.53

279.68

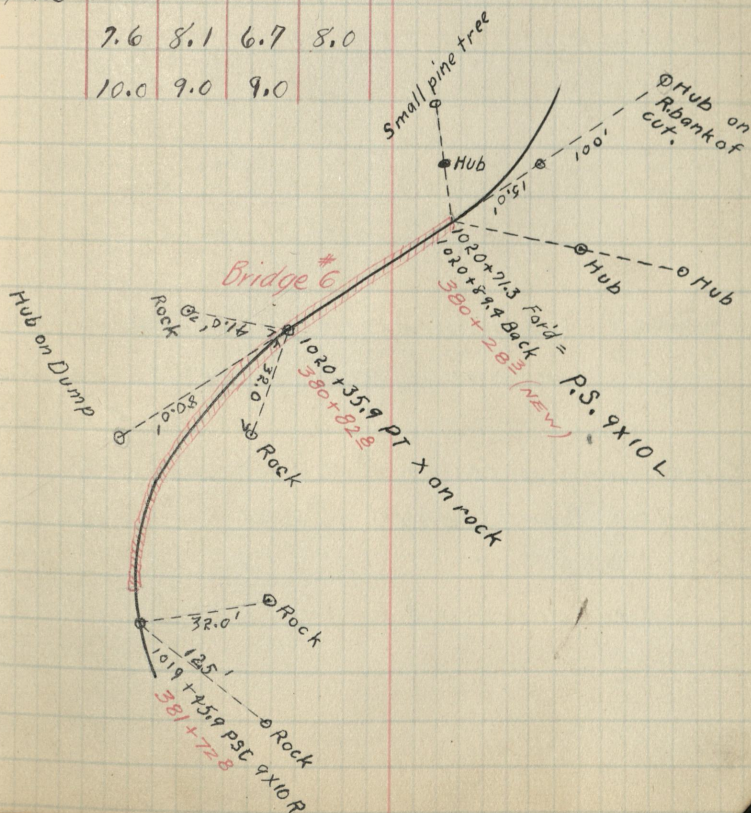
53.11

BRIDGE #6

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	
1.	380 + 27 ⁺	3968.13		3-10		
2.	+ 41 ⁹	67.68	34.9	4-22		
3.	+ 55 ⁹	67.23	39.0	4-14	4-18	1-
4.	+ 69 ⁹	67.78	28.6	4-16	4-24	1-
5.	+ 83 ⁹	66.31	24.9		4-18	1-
6.	+ 97 ⁹	65.89	25.6		4-24	1-
7.	381 + 11 ⁹	65.47	29.7		4-16	1-
8.	+ 25 ⁹	65.05	41.5		4-24	1-
9.	+ 39 ⁹	64.63	48.0	4-10	4-12	1-
10.	381 + 54 ⁺	3964.19	61.2	3-10		



14.



BRIDGE #6-

Height 40'

Mile 33.20 from P & E Junction

Length 127.7'

Mtl. Lin. ft. Ft. B. M. Kind Rate Amount ^{Total} Amt.

Piling	256		O.P.	.3375	86.40	
"	55		N.P. tr'd.	.156	8.58	
"	11		N.P. SH.	.10	1.10	96.08

Timber	469		N.P.	12.80	6.00	
"	1296		N.P. tr'd.	15.30	19.83	
"	2196		O.P.	25.20	55.34	
"	28043		O.P. SH.	16.00	448.69	
"	1152		R.W. SH.	16.00	18.43	548.29

Iron	33156	Wt.	Rate	Amt.	
" Wrought	1412		.01	14.12	
" "	52		.037	1.92	
" "	20		.032	.64	
" Cast	1940		.01	19.40	36.08

✓ 3427 Cost Material \$680.45

Labor — Pile Driving —	132.40
Carpenter —	281.00
Teaming —	168.92
	582.32

Total Cost — \$1262.77

Cost per lin. ft. — \$9.94 ^{1417.37} ~~1116~~

Cost of Carp. per M. — \$8.47 OK.

Nº Piles — 22 —

Cost of driving 1 pile — \$6.02 OK.

Note — See note on Page 2

40'

127.7'

591

mt.

76.08

48.29

36.08

80.45

82.32

62.77

7.37

BRIDGE #7

Bent	Station	Elev. Grade	Elev Ground	Piles	Posts	Sill
1	391+62 ⁸	3933.22		3-20		
2	+77 ³	32.74		4-24		
3	+91 ³	32.28		4-18	4-14	1-2
4	392+05 ³	31.82	3899.10	4-14	4-24	1-2
5	+19 ³	31.36	95.20	4-8	4-10 4-24	1-2 1-30
6	+33 ³	30.90	91.10		4-18 4-24	1-2 1-30
7	+47 ³	30.44	87.70		4-20 4-24	1-2 1-30
8	+61 ³	29.98	88.50		4-18 4-24	1-2 1-30
9	+75 ³	29.51	3919.50		4-14	1-2
10	392+89 ⁸	3929.03	3929.20			

Station 391+62^s to 392+89^s

16

Posts	Sills	Piles in Ground			
		1	2	3	4
		21.6	18.8	15.5	
		18.0	18.4	17.2	17.0
-14	1-22	17.2	12.6	11.8	11.0
-24	1-26	10.0	9.5	10.6	6.2
-10	1-26				
-24	1-30	3.8	4.4	5.3	3.5
-18	1-26				
-24	1-34				
-26	1-26				
-24	1-36				
-18	1-26				
-24	1-36				
-14	1-22				

BRIDGE #7—

Height 45'

Mile 33.43 from P & E Junction.

Length 127.8'

Mtl.	Lin. Ft.	B.M.	Kind	Rate	Amount	Total Amt.
Piling	169		O.P.	.3375	57.04	
"	60		O.P.S.H.	.10	6.00	
"	81		N.R. tr'd	.156	12.64	75.68
Timber		464	N.P.	12.80	5.94	
"		2016	N.R. tr'd	15.30	30.84	
"		2988	O.P.	25.20	75.30	
"		29604	O.P.S.H.	16.00	473.66	585.74
Iron		³⁵⁰⁹² Wt.		Rate	Amt.	
" Wrought		1185		.01	11.85	
" "		10		.05	.50	
" "		10		.032	.32	
" "		60		.037	2.22	
" Cast		1770		.01	17.70	32.59

³⁰³⁵ Cost Material — \$694.01

Labor — Driving Piles — 101.05

Carpenter — 259.20

Teaming — 164.50 524.75

Total Cost — \$1218.76

Cost per lin. ft. — \$9.53 ¹⁰⁷³Cost of Carp. per M. — \$7.39 ^{o.k.}

No Piles — 19 —

Cost of driving 1 pile — \$5.32 ^{o.k.}

Note — See note on Page 2

5'
07.8'
tal
mt.

17

7

75.68

85.77

32.59

94.01

24.75

8.76

23

BRIDGE #8

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	Si
1	440+74 ⁵	3226.04	56.7	3-18		
2	+88	25.63		4-22		
3	441+02	25.12	58.0	4-12	4-14	1-
4	+16	24.79	45.8	4-14	4-22	1-
5	+30	24.36	32.6	4-14	4-28	1-
6	+44	23.94	32.7	4-14	4-28	1-
7	+58	23.52	32.9	4-12	4-28	1-
8	+72	23.09	44.4	4-12	4-24	1-
9	+86	22.67	51.0	4-8	4-16	1-
10	442+00	22.25		4-18		
11	+145	3721.84	61.7	3-10		

Def. 110 440+52 ³ 25.54 1076.73						
1	+75 ²⁵	40' 12"	26.04	8 ²⁵	8 ²⁵	
2	40+89	30' 42"	25.62	10	15	
3	41+02 ²⁵	30' 08"	25.21	12 ⁵	12 ⁵	2nd panel 15 long
4	+16 ⁵⁰	23' 30"	24.80	11 ⁵	23 ¹⁵	3rd 15 short
5	+30 ²⁵	10' 49"	24.39	16	17 ¹	
6	41+44	10'	23.98	18 ²	20 ⁰	
7	+57 ²⁵	00' 07"	23.57	30	30	
P.C.	441+60 ³	00' 00"	23.49			
8	+71 ⁵⁰		23.17	21 ⁰	16 ⁴	
9	+85 ²⁵		22.78	18 ²⁵	15 ⁰	
10	+99		22.39	12 ³	10 ³	
11	442+70 ²⁵		22.00	8 ³	8 ⁰	
	42+25		21.65	Top Tie		

18

Piles in Ground

Sills

1	2	3	4.
---	---	---	----

13.5 13.5 15.8 14.7

1-22

10.7 9.0 7.7 7.8

1-26

9.0 5.5 7.0 7.2

1-28

5.0 5.2 5.2 4.9

1-28

6.6 6.3 6.2 6.3

1-28

7.2 6.0 6.0 6.0

1-26

6.3 8.6 7.4 6.0

1-22

6.3 6.8 7.2 7.8

17

18 15 25 15

14. 14. 14.



See page 69
" " 70

BRIDGE #8—

Height 36'

Mile 34.35 from P+E Junction - Length 140.8'

Mtl.	Lin. Ft.	B.M.	Kind	Rate	Amt.	Total Amt.
Piling	117		O.P.	.3375	39.49	
"	190		O.P.S.H.	.10	19.00	
"	237		N.P. tr'd.	.156	36.97	95.46
Timber		29865	O.P.S.H.	16.00	477.84	
		2184	O.P.	25.80	55.04	
		336	N.P.	12.80	4.30	539.18
		32385				

Iron	Wt.	Rate	Amt.
" Wrought	1252	.01	12.52
" "	80	.037	2.96
" "	20	.032	.64
" Cast	1850	.01	18.50
	3202		34.62

Cost Material \$667.26

Labor—	Pile Driving —	144.10
	Carpenter —	218.40
	Teaming —	180.14
		542.64

Miscellaneous pro rated —	
Material —	50.00
Pile Driving —	13.00
Carpenter —	19.00
Teaming —	18.00
	100.00

Total Cost — \$1309.90

Cost of driving 1 pile — \$3.74 ^{at} 1483.33

Nº Piles — 42 —

Cost of Carp. per M. — \$7.33 ^{OK}

Cost per lin. ft. — \$9.36 ^{10.52}

Note—See note on Page 2

36'

140.8'

tal

mt.

95.46

39.18

4.62

67.26

12.64

00.00

99.90

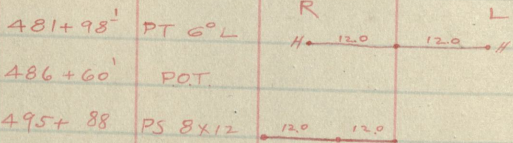
3.33

19

8

BRIDGE #9

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	Sills
1	485+96 ³	3636.42		3-10		
2	486+10 ³	35.99		4-16		
3	+24 ³	35.54	22.8	4-18		
4	+38 ³	35.09		4-16		
5	486+52 ³	3634.66		3-10		



Station 485+96³ to 486+52³

20

Sills. Piles in Ground

1	2	3	4
8.7	7.5	7.6	
8.4	8.4	8.3	9.1
6.4	6.0	5.9	5.0
8.3	8.0	7.3	8.2
8.0	9.4	10.0	

BRIDGE #9.

Mile 35.20 from P & E Jct.

Height 12'

Length 57.4'

	Mtl.	Lin. Ft.	B.M.	Kind	Rate	Amount	Total Amt.
Piling		142		O.P.S.H.	.10	14.20	
"		118		N.P. tr'd.	.156	18.41	32.61
Timber			7148	O.P.S.H.	16.00	114.37	
"			48	N.P.	12.80	.61	114.98
Iron			7196	Wt.	Rate	Amt.	
" Wrought			351		.01	3.51	
" "			25		.032	.80	
" "			10		.037	.37	
" Cast			1080		.01	10.80	15.48
			1466				

Cost Material \$163.07

Labor — Pile Driving —	72.40	
Carpenter —	43.00	
Teaming —	107.50	222.90

Miscellaneous pro rated

Material —	22.00	
Pile Driving —	10.00	
Carpenter —	6.00	
Teaming —	12.00	50.00

Total Cost — \$435.97

Cost per lin. ft. — \$7.51 881 505.57

Cost of Carp. per M. — \$6.81 OK.

Nº Piles — 18 —

Cost of driving 1 pile — \$4.57 OK.

Note — See note on Page 2

12'

57.4'

Total

Amt.

32.61

114.98

15.48

163.07

222.90

50.00

235.97

5.57

21

9

BRIDGE #10-

Bent	Station	Def.	Elev. Grade	Elev. Ground	Piles	Posts
1	567+91 ⁺	^{+ 32.5}	3385.32		3-8	
2	568+05 ⁺		84.99			4-10
3	+ 19 ⁺	-57 = 7"	84.47	71.0		4-18
4	+ 33 ⁺	-47 = 5 $\frac{1}{2}$ "	84.41			4-22
5	+ 47 ⁺	-37 = 4"	84.16	63.5		4-24
6	+ 61 ⁺	⁺	83.88	53.0	4-14	4-24
7	+ 75 ⁺	⁺	83.60	51.6	4-16	4-24
8	+ 89 ⁺	^{+ 210.5}	83.32	51.3	4-16	4-24
9	569+03 ⁺	⁺	83.04	51.0	4-16	4-24
10	+ 17 ⁺		82.76	54.3	4-12	4-24
11	+ 31 ⁺		82.48	62.5	4-10	4-16
12	569+45 ⁺		82.20		4-20	
			3381.92		3-16	

Piles	Posts	Sills	Piles in Ground					
			1	2	3	4	5	6
3-8			8.4 ⁰	8.6 ⁰	7.6 ⁰			
4-10								
4-18	1-24							
4-22	1-26							
4-24	1-26							
4-24	1-26		^N 5.8	^N 7.9	^N 9.8	^N 8.0	^N 8.1	^N 8.2
4-24	1-26		^N 5.6	^N 8.0	^N 7.8	^N 8.0	^N 8.0	^N 8.4
4-24	1-26		^N 5.0	^N 6.2	^N 7.0	^N 4.7	^N 6.0	^N 6.5
4-24	1-26					4.9	6.7	6.5
4-24	1-26					6.1	6.1	
4-24	1-26		⁰ 5.5	⁰ 6.5	⁰ 8.7	⁰ 10.4		
4-24	1-26		^N 14.5	^N 14.5	^N 12.5			

BRIDGE #10—

Height 32'

Mile 36.76 from P & E Jct.

Length 156.8'

Mtl.	Lin. Ft.	Ft. BM.	Kind	Rate	Amount	Total Amt.
Piling	182		O. P.	.3375	61.42	
"	318		N.P. tr'd.	.156	49.61	111.03
Timber		256	N.P.	12.80	9.68	
"		28590	O.P.S.H.	16.00	457.44	
"		9210	O.P.	25.20	232.09	699.21

Iron

38556

Wt. Rate Amt.

"	Wrought S.H.	1216	.01	12.16
"	" new	350	.032	11.20
"	"	58	.030	1.75
"	"	80	.037	2.96
"	"	5	.03	.15

" Cast 2120 .01 21.20 49.42

3829

Cost Material \$859.66

Labor — Driving Piles — 118.37

Carpenter — 290.44

Teaming — 196.27 605.08

Miscellaneous pro rated —

Material — 27.00 —

Driving Piles — 5.00

Carpenter — 11.00

Teaming — 7.00 50.00

Total Cost — \$1514.74

Cost per lin. ft. — \$9.65^{10.88}

Cost of Carp. per M. — \$7.82^{OK}

Nº Piles — 31 — *Note—See note on Page 2*

Cost of driving 1 pile — \$3.98^{OK}

2'

56.81

Total
Amt.

111.03

699.21

49.92

859.66

605.08

701.04

50.00

1514.74

708.64

e 2

23

10

BRIDGE #11 -

over Turkey Cr.

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	Sill
1	575+53	3371.46		3-16		
2	+67	71.42		4-22		
3	+81	71.40		4-20	4-12	1-2
4	+95	71.40		4-16	4-22	1-2
5	576+09	"	3335.0	4-16	4-28	1-2
6	+23	"		6-20	4-28	1-2
7	+37	"		6-20	4-28	1-2
8	+51	"		6-20	4-28	1-2
9	+65	"		6-20	4-28	1-2
10	+79	"		6-20	4-28	1-2
11	+93	"	3335.0	6-20	4-28	1-2
12	577+07	0	"	6-20	4-28	1-2
13	+21	"		6-20	4-28	1-2
14	+35	"		4-26	4-28	1-2
15	+49	"		4-12	4-28	1-2
16	+63	"		4-12	4-28	1-2
17	+77	"		4-14	4-24	1-2
18	+91	"		4-16	4-14	1-
19	578+05	"		4-26		
20	+19	3371.40		3-18		

Turkey Cr.

Station 575+53 to 578+19

24

Piles in Ground

sts	Sills	1	2	3	4	5	6
		N	N	N			
		11.5	14.0	15.0			
		OP	N	OP	OP		
		15.0	14.0	15.0	15.4		
		N	N	N	N		
12	1-20	13.0	10.5	11.3	11.7		
		N	N	N	N		
-22	1-26	7.0	8.0	7.4	8.0		
		N	N	N	N	N	N
-28	1-28	6.0	6.7	5.8	5.3	5.9	4.9
		N	N	N	N	N	N
-28	1-28	10.3	6.1	5.2	5.4	5.6	6.4
		N	N	N	N	N	N
-28	1-28	5.7	5.0	5.6	5.0	4.3	4.7
		N	N	N	N	0	N
-28	1-28	6.0	5.0	6.2	5.6	5.1	6.0
		N	N	N	N	N	N
-28	1-28	6.9	7.0	6.2	5.9	6.3	5.6
		N	N	N	N	N	N
-28	1-28	11.0	7.3	6.7	7.8	2.6	11.2
		0	0	N	N	0	N
-28	1-28	6.0	4.3	6.6	6.7	6.5	6.3
		N	N	N	N	N	N
28	1-28		5.0	5.5	4.3	5.7	5.8
			N	N	0	N	N
-28	1-28			5.3	5.6		6.0
				N	N	N	N
-28	1-28				6.0		5.0
					N	N	N
-28	1-28				7.0		6.7
					0	N	N
-28	1-28				4.2		4.8
				N	N		
-24	1-26			2.3	3.6		
		N	N	N	N		
-14	1-22	10.0	10.4	9.5	8.7		
		0	N	N	N		
		17.6	18.0	18.0	18.0		
		0	N	N			
		16.0	15.8	17.4			

BRIDGE #11 —

Height 37'

Mile 36.91 from P & E Junction.

Length 268'

Mtl.	Lin. Ft.	Ft. BM.	Kind	Rate	Amount	Total Amt.
Piling	1325		N.P. trid.	.156	206.70	
"	303		O.P.	.3375	102.26	308.96
Timber		464	N.P.	12.80	5.94	
"		58812	O.P. S.H.	16.00	940.99	
"		192	R.W. S.H.	16.00	3.07	
"		17051	G.P.	25.20	422.69	1379.69

Iron	76519	Wt.	Rate	Amt.	
" Wrought		2479	.01	24.79	
" "		233	.054	12.60	
" "		15	.05	.75	
" "		550	.032	17.60	
" "		100	.037	3.70	
" Cast		4024	.01	40.24	99.68

7401 Cost Material — \$1788.33

Labor —	Pile Driving —	296.84
	Carpenter —	549.50
	Teaming —	375.63
		1221.97

Total Cost — \$3010.30

Cost per lin. ft. — \$11.20 ¹²⁵⁰ 3351.28

Cost of Carp. per M. — \$7.18 ^{OK}

Nº Piles — 94 —

Cost of driving 1 pile — \$3.16 ^{OK}

Note See note on Page 2

80
tal
mt.

8.96

9.69

99.68

88.33

21.97

10.30

51.28

BRIDGE 12 -

Bent	Station	Elev. Grade	Elev. Ground	Piles	Posts	Stk/s
1	656+35 ⁶	83.87	78.7			
2	+49 ⁶	84.23	73.1		4-7	1-18
3	+63 ⁶	84.60	69.7		4-16	1-22
4	+77 ⁶	84.98	62.5		4-24	1-26
5	+91 ⁶	85.35	59.2		4-28	1-28
6	657+05 ⁶	85.73	60.6		4-26	1-28
7	+19 ⁶	86.10	62.6		4-18	1-24
8	+33 ⁶	86.47	76.8	4-16		
9	657+47 ⁶	86.82	79.5	3-10		

B.M. on hub 70' R Sta. 654+16⁵ (new) = 3598.01

STATION 656+35⁶ TO 657+47⁶

26

Piles in Ground

ts	Silt/s	1	2	3	4	5
----	--------	---	---	---	---	---

7	1--18'					
---	--------	--	--	--	--	--

6	1--22					
---	-------	--	--	--	--	--

4	1--26					
---	-------	--	--	--	--	--

8	1--28					
---	-------	--	--	--	--	--

6	1--28					
---	-------	--	--	--	--	--

8	1--24					
---	-------	--	--	--	--	--

✓

✓

Mile 38.44 from P+E Jct.

BRIDGE #12 -

BILL OF MATERIAL

Mtl. Ps	Size	L	BM. Kind	Rate	Amount	Total Amt.
Lumber	6X12		1488' RW SH	16.00	25.34	
	4X12		96 " "			
	12X12		1872 O.P.	20.70	25.27	
	12X14		1764 " "			
	12X12		5868 O.P. SH	16.00	93.89	
	3X10		775 O.P.	20.70	16.04	
	3X12		552 N.P.	12.80	9.32	
	2X12		176 " "			
	7X16		6720 O.P. SH	16.00	107.52	
	6X8	9	2808 O.P.	20.70	74.02	
	6X6	16	768 " "			
	6X8	16	2304 O.P. SH	16.00	36.86	
					25191	438.26

Height - 28' - Length - 112'

27

MATERIAL AND COST

Total
Amt.

~~\$438.26~~

Iron Pcs		Wt.	Rate	Amt.
28	Drifts (new) $\frac{3}{4} \times 20"$	84	.07	1.96
75	Brace blts. " $\frac{3}{4} \times 18"$	195	.093	6.98
2	" " " $\frac{3}{4} \times 21"$	6	.106	.21
66	Chord blts. S.H. $\frac{5}{8} \times 33"$	205	.109	7.19
48	Guard " " $\frac{3}{4} \times 24"$	187	.110	5.28
28	Dowels (new) $1 \times 8"$	47	.061	1.71
	Bt. Spikes " $\frac{1}{2} \times 10"$	70	.037	2.59
	" " " $\frac{3}{8} \times 8"$	35	"	1.30
	Wire Spikes " 60°	75	.032	2.40
390	Washers S.H. $\frac{3}{4} \times 4"$	819	.0274	10.69
132	Spools " $\frac{3}{4} \times 1\frac{1}{2}"$	634	.083	10.96
2	Anchor Blts. S.H. $1\frac{1}{4} \times 3"$	25	.015	} .45
1	" " " $1\frac{1}{4} \times 5"$	21	"	
		2403		51.72

Cost Material - ~~\$489.98~~

Labor — Teaming — \$158.05

Carpenter — 313.53 471.58

Explosives 5.91

Total Cost — ~~\$967.47~~

1105.23

Cost per lin. ft. — ~~\$8.64~~ 9.86

Cost of Carp. per M. — \$12.45 ok.

Note - See note on Page 2

BRIDGE #13-

Bent	Station	Elev.	Elev.	Posts	Sills
1	711 + 89 ⁶	37 39.43	36.7		
2	712 + 03 ⁶	39.20	30.6	4-10	1-20
3	+ 17 ⁶	40.39	17.8	4-24	1-26
4	+ 31 ⁶	40.88	07.2	4-12 4-22	1-26 1-32
5	+ 45 ⁶	41.37	12.6	4-10 4-22	1-30 1-36
6	+ 59 ⁶	41.86	21.4	3-22 1-26	1-26
7	+ 73 ⁶	42 42.35	28.2	4-16	1-22
8	+ 87 ⁶	42.84	35.2	4-8	1-18
9	713 + 01 ⁶	37 43.31	40.6		

Station 711+89⁶ to 713+01⁶

28

15

511

20

26

26

32

30

36

26

22

18



Mile 39.49 from P+E Jct.

BRIDGE #13-

BILL OF MATERIAL

Material	Size	L	BM	Kind	Rate	Amount	Total Amt.	
Lumber	6X12		1680	R.W.S.H.	16.00	26.88		Iron
	12X12		2760	O.P.	20.90			
	12X17		1764	"	"		167.67	
	6X8	9	2808	"	"			
	6X6	16	768	"	"			
	3X10		2175	"	"	45.02		
	12X12		8076	O.P.S.H.	16.00			
	7X16		6720	"	"	277.20		
	6X8	16	2560	"	"			
	3X12		834	N.P.	12.80	13.25		
	2X12		240	"	"			
	12X12		216	R.W.	25.10	5.42	536.44	
			30601				\$ 536.44	

Height 37' Length 112' — 29

MATERIAL AND COST

Total
Amt.

~~536.44~~

Iron	Pcs.		Wt.	Rate	Amt.
44	Drifts	$\frac{3}{4} \times 20"$	132	.07	3.08
120	Brace Bits.	$\frac{3}{4} \times 18"$	312	.093	11.16
15	" "	$\frac{3}{4} \times 21"$	45	.106	1.59
66	Chord Bits. S.H.	$\frac{5}{8} \times 33"$	205	.109	7.19
48	G'd. rail "	$\frac{3}{4} \times 29"$	187	.11	5.28
40	Dowels	1X8"	68	.061	2.44
	Bt. Spikes	$\frac{1}{2} \times 10"$	70	.033	2.31
	" "	$\frac{3}{8} \times 8"$	35	"	1.16
	Wire Nails	60 ^D	85	.032	2.72
500	Washers S.H.	$\frac{3}{4} \times 4"$	1050	.0274	13.70
132	Spools	" $\frac{3}{4} \times 4\frac{1}{2}"$	634	.083	10.96
1	Anchor	" $1\frac{1}{4} \times 3"$	13	.015	.60
3	"	" $1\frac{1}{4} \times 5"$	62	"	61.19

²⁸⁹⁸
Cost Material — \$597.63

Labor — Teaming — 116.47

Carpenter — 384.37 500.84

Explosives — 5.91

Total Cost — \$1104.38

1242.14

Cost per lin. ft. — \$9.86 11.09

Cost of Carp. per M. — \$12.56 *OK*

Note — See note on Page 2

BRIDGE #14 —

Bent	Station	Elev.		Piles	Posts	Sills
		Grade	Ground			
1	766+86 ³	13.58	03.7	3-10		
2	767+01 ⁰⁵	14.09		4-20		
3	+15 ⁸	14.61	94.6	4-12	4-14	1-22
4	+30 ⁵⁵	15.12	38 93.4	4-14	4-14	1-22
5	+45 ³⁰	15.64		4-8	4-14	1-22
6	+59 ⁸⁵	16.15		4-16		
7	767+77 ⁶⁰	16.66	3908.6	3-10		

8

9

Station 766+86³ to 767+74⁶⁰

30

Piles in Ground

ts	Sills	1	2	3	4	
		$\frac{10}{10.0}$	$\frac{10}{10.0}$	$\frac{10}{10.0}$		
		$\frac{10.0}{5.7}$	$\frac{8.0}{5.0}$	$\frac{8.0}{4.0}$	$\frac{8.0}{5.7}$	All Oreg.
		$\frac{19.0}{8.5}$	$\frac{21.0}{8.0}$	$\frac{21.0}{9.0}$	$\frac{19.0}{8.7}$	" "
4	1-22	$\frac{12.0}{4.0}$	$\frac{12.0}{4.3}$	$\frac{12.0}{4.7}$	$\frac{12.0}{6.5}$	" "
4	1-22	$\frac{17.0}{8.0}$	$\frac{18.0}{7.4}$	$\frac{18.0}{8.0}$	$\frac{18.0}{7.8}$	" "
4	1-22	$\frac{18}{12.2}$	$\frac{16}{10.0}$	$\frac{17}{10.5}$	$\frac{18}{13.0}$	" "
		$\frac{10.}{10.0}$	$\frac{10.}{10.0}$	$\frac{10.}{10.0}$		

Mile 40.53 from P+E Jct.

BRIDGE #14-

BILL OF MATERIAL

Material	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
Piling		362		O.P.	.207	74.93	
Lumber	12X12		792	"	.2070	217.56	
	12X14		1372	"	"		
	3X10		330	"	"		
	7X16		4040	"	"		
	6X8	9	2376	"	"		
	6X6	16	576	"	"		
	6X8	16	1024	"	"	45.89	
	12X12		1572	O.P.S.H.	16.00		
	6X8	16	512	"	"		
	12X4		784	"	"	10.37	348.75
	3X12		690	N.P.	12.80		
	2X12		120	"	"		

Iron Ps.		14188		Wt.	Rate	Amt.	348.75
38 Drifts	$\frac{3}{4}$ X20"		114	.07		2.66	
50 Brace Blts.	$\frac{3}{4}$ X18"		125	.093		4.65	
50 Chord Blts. S.H.	$\frac{5}{8}$ X33"		155	.109		5.45	
36 Guard "	$\frac{3}{4}$ X29"		141	.11		3.96	
12 Dowels	1X8"		21	.061		.73	
Bt. Spikes	$\frac{1}{2}$ X10"		40	.033		1.32	
" "	$\frac{3}{8}$ X8"		20	"		.66	
Wire Nails	60D		20	.032		.64	
280 Washers S.H.	$\frac{3}{4}$ X4"		588	.0274		2.67	
100 Spools	" $\frac{3}{4}$ X4 $\frac{1}{2}$ "		480	.083		8.30	36.04

1704

384.79

Height ^{19'} 22' - Length 90.5' - 31

MATERIAL AND COST

Total
Amt.

~~\$~~384.79

Labor — Pile Driving — \$110.40

Teaming — 130.03

Carpenter — 113.79

354.22

Total Cost — \$739.01

Cost per lin. ft. — ~~\$~~8.17 9.45

860.61

Cost of Carp. per M. — ~~\$~~8.02 ok.

Nº Piles — 26 —

Cost of driving 1 pile — \$4.25 ok.

Note — See note on Page 2

BRIDGE #15-

Bent	Station	Elev. Grade	Elev. Ground	Piles	Sills	F
1	776 + 62	39.47.36	48.6	3-16		
2	+76 ⁵⁰	47.83		2-18 2-20		
3	+91 ²⁵	48.32	27.5	4-10	1-26	4
4	777 + 06	48.81	21.8	4-12	1-26	4
5	+20 ⁷⁵	49.30	19.5	4-10	1-28	4
6	+35 ⁵⁰	49.78	17.0	4-12	1-28	4
7	+50 ²⁵	50.27	13.6	3-10 3-12	1-30	4
8	+65 ⁰⁰	50.76	12.8	6-12	1-30	4
9	+79 ⁷⁵	51.25	16.8	6-16	1-30	4
10	+94 ⁵⁰	51.73	17.0	6-14	1-30	4
11	778 + 09 ²⁵	52.22	16.0	6-12	1-28	4
12	+24	52.71	18.3	6-14	1-28	4
13	+38 ⁷⁵	53.21	20.0	4-14	1-26	4
14	+53 ⁵⁰	53.70	25.8	4-12	1-22	4
15	+68 ²⁵	54.18	28.5	4-18		
16	778 + 83 ⁰⁰	39 54.66		3-6		

Station 776+62 to 778+83

32.

		Piles in Ground					
Bitts	Posts	1	2	3	4	5	6
		<u>16</u> 14.3	<u>16</u> 16.0	<u>16</u> 17.4			
		<u>18</u> 13.6	<u>19</u> 14.5	<u>18</u> 12.1	<u>19</u> 15.8		
1-26	4-20	<u>10.0</u> 4.0	<u>11.0</u> 5.4	<u>11.0</u> 7.7	<u>10.0</u> 8.6		
1-26	4-24	<u>12.0</u> 4.0	<u>12.0</u> 6.4	<u>12.0</u> 5.7	<u>12.0</u> 6.2		
1-28	4-28	<u>11.0</u> 3.2	<u>11.0</u> 7.7	<u>10.0</u> 5.4	<u>11.0</u> 6.3		
1-28	4-28	<u>12.0</u> 2.0	<u>12.0</u> 5.2	<u>12.0</u> 7.5	<u>12.0</u> 5.0		
1-30	4-30	<u>10.0</u> 2.3	<u>10.0</u> 3.1	<u>10.0</u> 3.0	<u>10.0</u> 4.7	<u>11.0</u> 4.4	<u>11.0</u> 4.6
1-30	4-30	No piles					
1-30	4-30		<u>19</u> 6.0	<u>18.1</u> 6.2	<u>17.1</u> 5.0	<u>18</u> 5.0	<u>21</u> 6.7
1-30	4-30	<u>16</u> 5.3	<u>16</u> 5.3	<u>17</u> 6.6	<u>17</u> 5.4	<u>16</u> 5.6	<u>14</u> 7.0
1-28	4-28	<u>12</u> 4.8	<u>12</u> 5.2	<u>12</u> 5.0	<u>12</u> 5.6	<u>12</u> 5.0	<u>12</u> 7.5
1-28	4-26	<u>14</u> 8.0	<u>14</u> 2.0	<u>14</u> 6.8	<u>14</u> 7.5	<u>14</u> 2.1	<u>14</u> 7.3
1-26	4-22	<u>16</u> 2.1	<u>18</u> 10.0	<u>17</u> 10.2	<u>18</u> 7.0		
1-22	4-14	<u>12</u> 2.2	<u>12</u> 2.0	<u>12</u> 8.0	<u>12</u> 7.8		
		<u>18.0</u> 8.4	<u>18.0</u> 8.5	<u>18.0</u> 8.4	<u>18.0</u> 8.4		
		<u>10.0</u> 2.0	<u>9.0</u> 2.0	<u>10.0</u> 3.6			

Mile 40.70 from
P & E Jct.

BRIDGE #15

BILL OF MATER

Material	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
Piling		840		O.P.	.207	173.88	173.88
Lumber	12X12	5112	"	"	20.70	771.49	
	12X14	3136	"	"	"		
	3X10	4350	"	"	"		
	7X16	12600	"	"	"		
	6X8	9 5832	"	"	"		
	6X6	16 1440	"	"	"		
	6X8	16 4800	"	"	"		
	12X12	15636	OP.SH.	16.00	280.96		
	6X8	16 1728	"	"			
	12X14	196	"	"			
	3X12	834	N.P.	12.80	14.57		
	2X12	304	"	"			
	6X12	72	RW.SH.	16.00			
		56040				11.52	1078.54
							\$1252.42

Height-37'-Length-223'

33

TERIAL AND COST

	Mtl.	Pcs.		Wt.	Rate	Amt.	Total Amt.
							1252.42
3.88	Iron	130	Drifts	$\frac{3}{4} \times 20"$	390 .07	9.10	
		215	Brace Bits	$\frac{3}{4} \times 18"$	559 .093	20.00	
		30	" "	$\frac{3}{4} \times 21"$	85 .106	3.18	
		122	Chord Bits S.H.	$\frac{5}{8} \times 33"$	379 .109	13.30	
		90	Gd Rail " "	$\frac{3}{4} \times 29"$	351 .110	9.90	
		56	Dowels	1X8"	96 .061	3.42	
			Bt. Spikes	$\frac{1}{2} \times 10"$	165 .033	5.44	
			" "	$\frac{3}{8} \times 8"$	80 .033	2.64	
			Nails 60 [□]		95 .032	3.04	
		920	Washers S.H.	$\frac{3}{4} \times 4"$	1932 .0274	25.21	
		180	Spools " "	$\frac{3}{4} \times 4\frac{1}{2}"$	864 .083	14.94	
		2	Anchor Bits	$1\frac{1}{2} \times 5"$	42 .15	.30	110.47

Labor — Pile Driving ^{50.38} — 267.84 —
 Teaming — 192.57 —
 Carpenter — 539.02 — 999.43

Total Cost — ~~2362.32~~

Cost per lin. ft. — ~~10.59~~ ^{11.30} 2631.60

Cost of Carp. per M. — ~~9.62~~ ^{OK}

No Piles — 62 —

Cost of driving 1 pile — ~~4.32~~ ^{OK}

Note — See note on Page 2

Mi
P4

BRIDGE #16

Station 838+35⁶ to 840+41⁸⁵

Bent	Station	Ground Elev. R	Grade Elev. L	Grade	Posts	S
Mac	1	838+35 ⁶	94.6	04.41	4-8	1-
Pill	2	+50'	91.1	04.83	4-14	1-
Lum	3	+64 ⁸⁵	86.2	05.26	4-20	1-
	4	+79 ⁶⁰	$\frac{98.0}{12.0}$ 80.1 $\frac{82.5}{12.0}$	05.69	4-26	1-
	5	+94 ³⁵	75.2	06.11	4-30	1-
	6	839+09 ¹⁰	71.2	06.53 + 2.86	4-12	1-
	7	+23 ⁸⁵	65.8	06.95	4-24	1-
	8	+38 ⁶⁰	40.69.7	07.38	4-18	1-
	9	+53 ³⁵	$\frac{76.6}{14.0}$ 73.0 $\frac{68.9}{14.0}$	839+45 ⁷ 07.84	4-24	1-
	10	+68 ¹⁰	$\frac{80.1}{14.0}$ 77.3 $\frac{75.9}{14.0}$	08.29	4-30	1-
	11	+82 ⁸⁵	$\frac{84.9}{14.0}$ 88.4 $\frac{78.8}{14.0}$	08.94 + 3.16	4-26	1-
	12	+97 ⁶⁰	$\frac{89.6}{12.0}$ 87.4 $\frac{84.4}{12.0}$	09.19	4-22	1-
	13	840+12 ³⁵	$\frac{94.5}{10.0}$ 92.4 $\frac{91.0}{10.0}$	840+01 ⁷ 09.64	4-18	1-
	14	+27 ¹⁰	$\frac{00.6}{10.0}$ 92.5 $\frac{95.2}{10.0}$	10.02 + 2.50	4-8	1-
	15	840+41 ⁸⁵	$\frac{04.9}{10.0}$ 93.0 $\frac{00.4}{10.0}$	10.39		

16

17

18

Posts Sills

4-8	1-18
4-14	1-22
4-20	1-24
4-26	1-28
4-30	1-30
4-12	1-26
4-24	1-32
4-18	1-26
4-24	1-36
4-18	1-26
4-24	1-36
4-12	1-26
4-24	1-32
4-30	1-30
4-26	1-28
4-22	1-26
4-18	1-24
4-8	1-18

Mile 41.87 from P+E Jct.
P+E

FRAME TRESTLE

BRIDGE #16-

BILL OF MATERIALS

MA	Material	Size	L	B.M.	Kind	Rate	Amount	Total Amt.	Iron
Pil	Lumber	12X12		7680	O.P.	20.70			
Lum		12X14		2940	"	"			
		3X10		3500	"	"			
		7X16		11760	"	"	778.24		
		6X8	9	5508	"	"			
		6X6	16	1344	"	"			
		6X8	16	4864	"	"			
		12X14		5880	R.S.H.	16.00	277.82		
		12X12		16776	"	"			
		4X12		1888	R.W.	25.10	47.39		
		3X12		876	N.P.	12.80	16.13		
		2X12		384	"	"		1119.58	
				58108				1119.58	

Mill N
Pg

BRIDGE #17

	Bent	Station	Elev.	Piles in Ground	Height of Bents			
				1 2 3 4				
Ma	1	924+89 ³⁰	7347.16	$\frac{170}{14.7}$	$\frac{180}{15.5}$	$\frac{180}{13.2}$	$\frac{240}{6.6}$	0.0
	2	925+03 ⁸⁰	47.65	$\frac{200}{10.0}$	$\frac{240}{8.2}$	$\frac{240}{8.0}$	$\frac{240}{6.6}$	7.0
Pill	3	+18 ⁵⁵	48.15					20.0
Lum	4	+33 ³⁰	48.65					24.0
	5	+48 ⁰⁵	49.15					26.5
	6	+62 ⁸⁰	49.65					29.3
	7	+77 ⁵⁵	50.15					34.0
	8	+92 ³⁰	50.65					38.0
	9	926+07 ⁰⁵	51.15					41.5
	10	+21 ⁸⁰	51.64					47.0
	11	+36 ⁵⁵	52.14					57.0
	12	+51 ³⁰	52.64					64.5
	13	+66 ⁰⁵	53.14					69.0
	14	+80 ⁸⁰	53.64					75.5
	15	+95 ⁵⁵	54.14					77.5
	16	927+10 ³⁰	54.64					80.0
	17	+25 ⁰⁵	55.14					68.3
	18	+39 ⁸⁰	55.64					56.0
	19	+54 ⁵⁵	56.14					48.3
	20	+69 ³⁰	56.64					43.0
	21	+84 ⁰⁵	57.13					37.3
	22	+99 ⁸⁰	57.63					31.0
	23	928+13 ⁵⁵	58.13					26.0
	24	+28 ³⁰	58.63					21.0
	25	+43 ⁰⁵	59.13					14.0
	26	+57 ⁸⁰	59.63	$\frac{20.0}{10.0}$	$\frac{24.0}{8.2}$	$\frac{24.0}{8.0}$	$\frac{24.0}{6.6}$	6.0
	27	928+72 ⁵⁵	4360.12	$\frac{170}{14.7}$	$\frac{180}{15.5}$	$\frac{180}{13.2}$	$\frac{240}{6.6}$	0.0

{ 49
92

Station 924+89³⁰ to 928+72⁵⁵

36

Height
of Bents

9.0

7.0

20.0

24.0

26.5

29.3

34.0

38.0

41.5

47.0

57.0

64.5

69.0

75.5

77.5

80.0

68.3

56.0

48.3

43.0

37.3

31.0

26.0

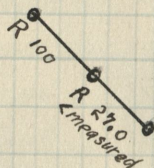
21.0

14.0

6.0

0.0

$$\left\{ \begin{array}{l} 490+38 \text{ PCC } 16^\circ \text{ R old} = \\ 924+75 \text{ }^{\text{g}} \text{ new} \end{array} \right\}$$



Mile 43.54 from
P & E Junction over
Black Warrior Gulch.

BRIDGE #17

BILL OF MATER

Material	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
Piling		145		O.P.	.207	30.15	30.02
Mid block	4X12	3424	R.W.	25.10	}	378.11	
Sills	12X12	11640	"	"			
"	12X12	4480	O.P.	25.20		112.90	
"	12X12	5048	"	21.00	}	805.06	
Posts	12X12	33288	"	"			
"	12X12	16836	O.P.	SH 16.00	}		
"	12X14	588	"	"		281.92	
Caps	12X14	196	"	"	}		
"	12X14	5096	O.P.	21.00		238.37	
Braces	3X10	6255	"	"	}		
"	3X10	7200	N.P.	16.00		153.60	
"	3X12	2400	"	"			
Stay plank	2X10	666	O.P.	37.50		24.98	
Stringers	7X16	21560	"	25.20		543.31	
"	7X16	280	O.P.	SH 16.00		4.48	
Ties	6X8	10368	O.P.	21.00	}	270.14	
Gd. rails	6X6	2496	"	"			
Chucks	3X12	180	N.P.	16.00		2.88	
End planks	7X16	560	N.P.	SH 12.00		6.72	
Girts	6X8	14080	O.P.	21.00		295.68	
Bbl. stands	3X12	156	N.P.	16.00		2.50	
"	"	2X10	120	O.P.	37.50	4.50	
Girts	6X8	6528	"	21.00		137.09	
Braces	3X10	2050	"	"		43.05	
"	3X10	330	"	"		6.93	3312.21

155825-155825

83342.21

Height-78'-Length-383' 37

IAL AND COST

Total
Amt.

\$3342.23

Ps	Kind	Wt.	Rate	Amt.
Iron 237	Drifts	$\frac{3}{4} \times 20"$	711.07	16.59
650	Bolts	$\frac{3}{4} \times 18"$	1690.093	60.75
205	"	$\frac{3}{4} \times 21"$	615.106	21.73
210	"	$\frac{5}{8} \times 33"$	651.109	22.89
156	"	$\frac{3}{4} \times 29"$	609.11	17.16
220	Dowels	1" x 8"	374.061	13.42
400	Bt. Spikes	$\frac{1}{2} \times 10"$	400.0328	13.12
"	"	$\frac{3}{8} \times 8"$	200.0328	6.56
	Nails 60°		308.032	9.60
4	Anchor Blts. S.H. $1\frac{1}{4} \times 3"$		650.05	.20
3	" " " $1\frac{1}{4} \times 5"$		62.05	.15
2450	Washers S.H. $\frac{3}{4} \times 4"$		5145.0274	67.13
420	Spools S.H. $\frac{3}{4} \times 4\frac{1}{2}"$		2016.083	34.86

283.86

Cost Material—¹²⁸²³3626.09

Labor—Pile Driving — \$17.50 ✓
 Teaming — 373.07 ✓
 Carpenter — 917.45 ✓
 Excavation — 273.91 ✓ 1581.93

Total Cost—\$5208.02

5683.10

Cost per lin. ft. — \$13.60 14.83

Cost of Carp. per M. — \$5.29 OK

Nº Piles — 7

Cost of driving 1 pile — \$2.19 \$2.50 OK

Note—See note on Page 2

Mill
P4

BRIDGE #18-

Station 954+36⁵ to 955+11

	Bent	Station	Elev. Grade	Elev. Ground
Ma	1	954+36 ⁵	4442.00	36.0
Pi	2	+51 ²⁵	42.42	32.7
Lum	3	+66	42.84	28.4
	4	+80 ⁹⁵	43.26	28.6
	5	+95 ⁵⁰	43.68	31.6
	6	955 +10 ²⁵	4444.10	34.1

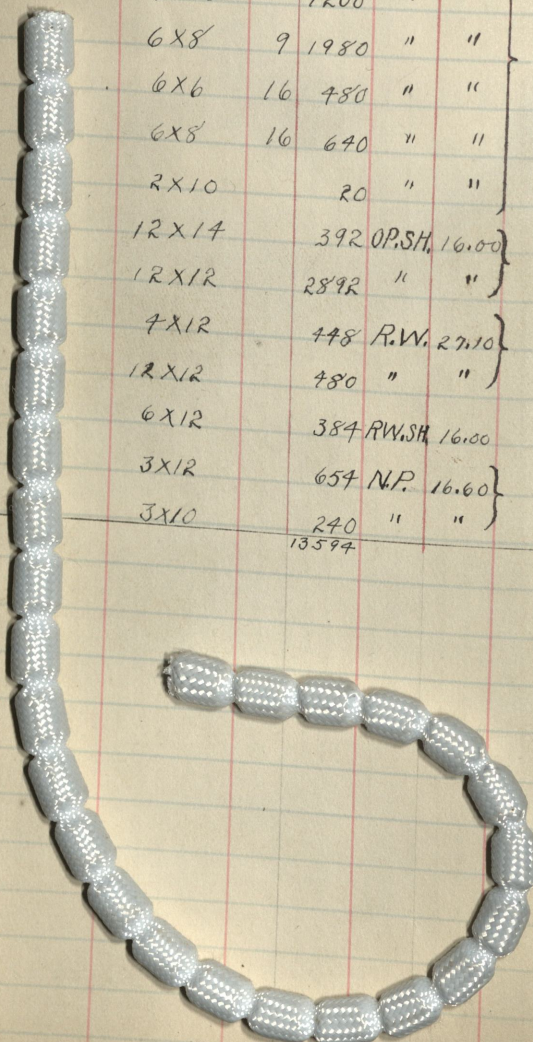
5 to 955 ft



Mile 44.08 from P & E Jct. BRIDGE #18-
TRESTLE
 Over Black Warrior River

BILL OF MATERIAL

M. M.	Material	Size	L	B.M.	Kind	Rate	Amount	Total Amt.	Mt
P. L.	Lumber	12X14		784	O.P.	22.70			170
Lu		7X16		4200	"	"			
		6X8	9	1980	"	"			
		6X6	16	480	"	"			
		6X8	16	640	"	"			
		2X10		20	"	"			
		12X14		392	O.P.S.H.	16.00			
		12X12		2892	"	"			
		4X12		448	R.W.	27.10			
		12X12		480	"	"			
		6X12		384	R.W.S.H.	16.00			
		3X12		654	N.P.	16.60			
		3X10		240	"	"			
				13594					
								282.63	
								282.63	



#18-

Height-14'-Length-75.0' 39

MATERIAL AND COST

Total Amt.	Mtl.	Pcs.	Kind	Wt.	Rate	Amt.	Total Amt.
	Iron	16	Drifts	$\frac{3}{4} \times 20"$	45.11	1.76	282.63
		28	"	$\frac{3}{4} \times 18"$	73.093	2.60	
		4	"	$\frac{3}{4} \times 21"$	12.11	.44	
		30	"	$\frac{3}{4} \times 29"$	117.154	4.62	
		42	"	$\frac{5}{8} \times 33"$	130.11	4.62	
		16	Dowels	1" x 8"	32.058	1.86	
			Bt. Spikes	$\frac{1}{2} \times 10"$	20.03395	.67	
			" "	$\frac{3}{8} \times 8"$	15.036	.54	
			Nails	60°	35.0335	1.17	
		2	Anchor Blts.	$1\frac{1}{2} \times 3"$	70	2.25	
		2	" "	$1\frac{1}{2} \times 5"$			
282.63		210	Washers (cast)	$\frac{3}{4} \times 4"$	441.03	6.30	
282.63		84	Spools	$\frac{3}{4} \times 4\frac{1}{2}"$	403.083	6.97	33.80
				¹³⁹³			
			Cost Material—				316.43

Approximate cost labor in Oct. to finish (Tisdale) 4.85

Labor—Excavation—33.43

Teaming—28.38

Carpenter—92.65 154.46

Frt. 22.78 t. A.F. to Mayer 88.7 @ .01 $\frac{1}{4}$ ton/mile 25.26

Total Cost—501.00

Cost per lin. ft.—~~6.68~~ 7.91

Cost Carpenter per M.—6.82 OK

Note—See note on Page 2

BRIDGE #19-

Station 966+92⁴ to 967+51¹⁵
Elev. Elev.

Bent Station Grade Ground

M	N	1	966+92 ⁴	4475.78	70.6
P	L	2	967+06 ⁹	76.07	68.8
L		3	+21 ⁶⁵	76.36	68.0
		4	+36 ⁴⁰	76.66	68.6
		5	+51 ¹⁵	76.95	70.6

51 15

40



Mile 44.32 from P+E Jct.

TRESTLE

BRIDGE #19-

BILL OF MATERIAL

Mtl.	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
Timber	12X14		588	O.P.	22.70		
	7X16		3080	"	"		
	6X8	9	1584	"	"		
	6X6	16	384	"	"		
	3X10		40	"	"		
	6X8	16	512	"	"		
	2X10		20	"	"		
	12X12		1032	O.P.	16.00		
	12X14		196	"	"		
	7X16		200	"	"		
	4X12		352	R.W.	27.10		
	12X12		648	"	"		
	6X12		336	R.W.	16.00		
	3X12		360	N.P.	16.60		
			9832				
						140.92	
						30.85	
						27.10	
						5.38	
						5.98	210.23

#19-

Height 7' - Length - 59.9' -

41'

MATERIAL AND COST

Total Amt.	Mtl.	Ps.	Kind	Wt.	Rate	Amt.	Total Amt.
							\$210.23
	Iron	12	Bolts	$\frac{3}{4} \times 20"$	34 .11	1.32	
		24	"	$\frac{3}{4} \times 18"$	62 .093	2.23	
		34	" S.H.	$\frac{5}{8} \times 33"$	105 .11	3.73	
		24	"	$\frac{3}{4} \times 29"$	94 .154	3.70	
		12	Dowels	$1 \times 8"$	24 .058	.70	
			Bt. Spikes	$\frac{1}{2} \times 10"$	20 .03375	.67	
			" "	$\frac{3}{8} \times 8"$	15 .036	.54	
			Nails 60°		35 .0335	1.17	
		3	Anchor Bt.s. S.H.	$1\frac{1}{4} \times 3"$	65	2.25	
		1	" " "	$1\frac{1}{4} \times 5"$			
		170	Washers	$\frac{3}{4} \times 4"$	357 .03	5.10	
		68	Spools S.H.	$\frac{3}{4} \times 4\frac{1}{2}"$	326 .083	5.64	27.05

210.23

Cost Material - ^{11.37} \$237.28Frt. 16.5 tons 88.7 miles @ $0.01\frac{1}{4}$ ton mile - 18.29

Labor - Teaming - 21.77

Carpenter - 55.78

Excavation - 25.36 102.91

Total Cost - ~~\$358.48~~Cost per lin. ft. - ~~\$6.08~~ 7.22

432.28

Cost of Carp. per M. - \$5.67 OK.

Note - See note on Page 2

BRIDGE #20

Station 983+91⁸ to 984+50⁵⁵

Elev.

Bent Station Grade

1 983+91⁸ 4514.24

2 984+06³ 14.62

3 +21⁰⁵ 15.01

4 +35⁸⁰ 45.39

5 984+50⁵⁵ 4515.77

B.M. on hub (60' R. Bent N^o 1) 4505.53
60' L Bent N^o 5

50 53

42



0

2

3

0

5

Mile 44.63 from P+E Jct.

WRESTLE

BRIDGE #20

BILL OF MATERIAL

Mtl.	Size	L.	B.M.	Kind	Rate	Amount	Total Amt.
Lumber	4X12	576	R.W.	22.10	}	36.72	
	12X12	768	"	"			
	12X14	588	O.P.	22.20	}		
	2X16	3360	"	"			
	6X8	9	1584	"	"		
	6X6	16	384	"	"	193.31	
	6X8	16	512	"	"		
	2X10	20	20	"	"		
	12X12	696	O.P.S.H.	"	}		
	12X14	1372	"	"			
	3X10	130	N.P.	16.60	}	12.72	
	3X12	636	"	"			
		10626					242.45

Iron Ps.

Wt. Rate Amt.

4 Bolts	$\frac{3}{4}$ X 21"	12	.11	.44
34 "	$\frac{5}{8}$ X 33"	106	.11	3.74
24 "	$\frac{3}{4}$ X 29"	94	.154	3.70
12 Dowels	1 X 8"	24	.058	.70
Bt. Spikes	$\frac{1}{2}$ X 10"	20	.03325	.67
" "	$\frac{3}{8}$ X 8"	15	.036	.54
Nails	60°	35	.0335	1.17
3 Anchor Blts.	S.H. 14x3"	46	labor mail	.30
170 Washers	$\frac{3}{4}$ X 4"	357		1.40
68 Spools	$\frac{3}{4}$ X 4 $\frac{1}{2}$ "	326	.0083	5.10
		1035		5.66

23.42

Cost Material — \$265.87

0-

Height-15' - Length-59.5'

43

MATERIAL AND COST

1 Amt

Total Amt

\$265.87

Frt. 16.45t. Af. to Mayer 88.7 miles @ .014 ton mile - 18.23

Labor - Excavation - 65.45

Teaming - 27.28

Carpenter - 67.24 159.97

Total Cost - \$444.07

517.87

Cost per lin. ft. - \$7.53 8.64

Cost of Carp. per M. - \$6.68 OA.

Note - See note on Page 2

2.45

23.48

65.89

BRIDGE #21-

Station 1002+72⁵ to 1003+16⁵⁰

Bent	Station	Elev.	Elev.
		Grade	Ground
1	1002+72 ⁵	4568.42	67.9
2	+87 ⁰	68.83	61.3
3	1003+01 ⁹⁵	69.24	64.5
4	+16 ⁵⁰	4569.64	68.4

650

44



0

2

3

0

5

Mile 44.99 from P+E Jct.

TRESTLE

BRIDGE #21-

BILL OF MATERIAL

Be	Mtl.	Size	L	B.M.	Kind	Rate	Amount	Total
	Timber	12X14		392	O.P.	22.70	22.79	
		6X8	9	324	"	"		
		6X6	16	288	"	"		
		12X12		576	O.P.S.H.	16.00	80.26	
		12X14		392	"	"		
		7X16		2800	"	"		
		6X8	9	864	"	"		
		6X8	16	384	"	"		
		4X12		448	R.W.	22.10	23.85	
		12X12		432	"	"		
		3X12		351	N.P.	16.60		
				7251			5.83	132.73

Iron Ps

Wt. Rate Amt.

8 Drifts	$\frac{3}{4}$ X 20"	22.11	.88
16 Bolts	$\frac{3}{4}$ X 18"	42.093	1.49
18 "	$\frac{3}{4}$ X 29"	70.154	2.77
30 "	S.H. $\frac{5}{8}$ X 35"	93.11	3.30
8 Dowels	1" X 8"	16.058	.16
Bt. Spikes	$\frac{1}{2}$ X 10"	10.03375	.34
" "	$\frac{3}{8}$ X 8"	6.036	.22
Nails	60°	25.0335	.83
2 Anchor Bts.	S.H. $1\frac{1}{2}$ X 5	45	1.13
130 Washers	$\frac{3}{4}$ X 4"	273.03	3.90
60 Spools	S.H. $\frac{3}{4}$ X $1\frac{1}{2}$ "	288.083	4.98
		890	20.30

Cost Material — \$153.03

2/-

Height - 8' Length - 44.9'

45°

MATERIAL AND COST

Total

Total Amt. m^t

~~\$~~153.03 2

Labor — Excavation — 22.25

Teaming — 19.18

Carpenter — 49.51 90.94

Frt. 12.23 t. — 88.7 miles @ .014 per ton mile — 13.57

Total Cost — ~~\$~~257.54

Cost per lin. ft. — ~~\$~~5.85 6.95 312.88

Cost of Carp. per M. — ~~\$~~6.81 OK.

Note - See note on Page 2

132.73

20.30

3.03

0

2

3

0

5

BRIDGE #22-

Station 1014+29⁴ to 1015+02⁹⁶

Bent	Station	Grade Elev.	Ground Elev.
1	1014+29 ⁴	4585.29	76.4
2	+43 ⁹	85.80	77.8
3	+58 ⁶⁵	86.31	69.1
4	+73 ⁷⁰	86.83	70.6
5	+88 ¹⁵	87.34	74.5
6	1015+02 ⁹⁶	4587.85	

0296

46

0

2

3

0

5

Mile 45.21 from P & E Jct.
TRESTLE

BRIDGE #22-

BILL OF MATERIAL

Material	Size	L	B.M.	Kind	Rate	Amount	Total Am
Timber	12X14		784	O.P.	22.70	172.34	
	7X16		4200	"	"		
	6X8	7	1980	"	"		
	6X6	16	780	"	"		
	6X8	16	128	"	"		
	2X10		20	"	"		
12X12		1764	O.P.	16.00	55.23		
12X14		1126	"	"			
6X8	16	512	"	"			
4X12		704	R.W.	22.10	47.05		
12X12		1032	"	"			
3X12		828	N.P.	16.60	15.90		
3X10		130	"	"			
			13738				290.81

290.52

290.52

2-

ATERIA

AND COST

Height-17' Length-74.9'

47

Total Amt	Mth.	Ps.	Kind	Wt.	Rate	Amt.	Total Amt
-----------	------	-----	------	-----	------	------	-----------

\$290.52

Iron 26 Drifts

 $\frac{3}{4} \times 20''$ 73 .11 2.86

33 Bolts

 $\frac{3}{4} \times 18''$ 86 .093 3.07

10 "

 $\frac{3}{4} \times 21''$ 30 .11 1.10

30 "

 $\frac{3}{4} \times 29''$ 117 .154 4.62

42 "

 $\frac{5}{8} \times 33''$ 130 .11 4.62

16 Dowels

1" x 8" 32 .058 .93

Bt. Spikes

 $\frac{1}{2} \times 10''$ 20 .03395 .67

" "

 $\frac{3}{8} \times 8''$ 15 .036 .54Nails 60^D

35 .0335 1.17

2 Anchor Blts. S.H. $1\frac{1}{4} \times 3''$

70

2.25

2 " " " " $1\frac{1}{4} \times 5''$

290.52

250 Washers

 $\frac{3}{4} \times 4''$ 525 .03 9.50

290.52

84 Spools S.H.

 $\frac{3}{4} \times 4\frac{1}{2}''$ 403 .083 6.97 36.30Cost Material ¹⁵³⁶ \$326.82

Labor — Teaming — 21.40

Excavation — 28.11

Carpenter — 87.32 136.83

Frt. 23.09 tons A.F. to Mayer

88.7 miles @ .014 ton mile 25.60

Total Cost — \$489.25

Cost per lin. ft. — \$6.61 7.75

Cost of Carp. per M. — \$6.35 O.K.

Note — See note on Page 2.

Be



23

48

Mile 46.57 from P & E Jct.
TRESTLE —

BRIDGE #23 —

BILL OF MATERIAL

Be	Mtl.	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
	Lumber	4X12		512	R.W.	22.70	25.02	
		12X12		408	"	"		
		12X12		384	O.P.	22.70		
		12X14		284	"	"		
		7X16		2100	"	"	89.17	
		6X8	16	384	"	"		
		3X10		180	"	"		
		6X6		96	"	"		
		3X12		510	N.P.	16.60		
	Switch ties	8X10		900	"	"	27.16	
	Track "	6X8		128	"	"		
		2X12		98	"	"		
				6484				141.35

Iron	Ps.		Wt.	Rate	Amt.
7	Drifts	$\frac{3}{4}$ X 20"	20	.07	.49
18	Bolts	$\frac{3}{4}$ X 18"	47	.097	1.75
18	"	$\frac{5}{8}$ X 33"	56	.11	1.98
14	"	$\frac{3}{4}$ X 29"	41	.154	2.16
	Nails	60 ^D	20	.0335	.67
	Bt. Spikes	$\frac{1}{2}$ X 10"	10	.0336	.54
	"	$\frac{3}{8}$ X 8"	10	"	.34
	Nails	10 ^D	5	.0335	.17
100	Washers	$\frac{3}{4}$ X 7"	210	.030	3.00
36	Spools S.H.	4 $\frac{1}{2}$ "	173	.083	2.29

592
Cost Material — \$155.24

Height-7' Length-30⁴'

49

RIAL AND COST

total Amt.

Total
Amt.

~~155.24~~

Frt. 10.88 t. A.F. to Mayer

77.5 miles @ .01 $\frac{1}{4}$ ton mile

10.54

Labor — Cribbing — 3.25

Excavation — 23.25

Carpenter — 38.12 64.62

Total Cost — \$230.40

267.30

Cost per lin. ft. — \$7.68-8.91

Cost of Carp. per M. \$5.88 OK.

Note — See note on Page 2

5.12
4.08

9.20*

9.00
1.28

19.48*

1.35



3.89

5.24

23

64.84

19.48*

9,999,980.52

45.36*

BRIDGE #24 -

Station $1175+14^3$ to $1175+73^{05}$

Bent Station Grade Elev. Ground Elev.

1	$1175+14^3$	50	37.37
2	$+28^{80}$		34.84
3	$+43^{55}$		35.31
4	$+58^{30}$		35.79
5	$1175+73^{05}$	50	36.26

19.80

4.48

4.80

3.84

32.92*

$$\begin{array}{r} \text{RW } 19.80 \\ \hline 1312 \end{array}$$

Bu 8
Bm

135.94

32.92*

9,999,967.08

$$\begin{array}{r} \text{OT } 103.02* \end{array}$$

Mile 48.26 from P & E Jct.
TRESTLE —

BRIDGE #24 —

BILL OF MATERIAL

B	Mtl.	Size	L	BM.	Kind	Rate	Amount	Total Amt.
	Lumber	6X12		96	R.W.	22.20	}	37.47
		4X12		512	"	"		
		12X12		268	"	"		
		12X12		1252	O.P.	22.20	}	206.62
		12X14		980	"	"		
		3X10		390	"	"		
		7X16		3500	"	"		
		6X8	9	1584	"	"		
		6X6	16	384	"	"		
		6X8	16	512	"	"	}	5.68
		3X12		318	N.P.	16.60		
		2X12		24	"	"		

10820

249.72

Iron Ps

Wt. Rate Amt.

12	Drifts	$\frac{3}{4}$ " X 20"	34.07	.84
30	Bolts	$(\frac{2}{4})^2$ X 18"	81.087	2.91
34	"	$\frac{5}{8}$ " X 33"	105.11	3.24
24	"	$\frac{3}{4}$ " X 29"	94.157	3.20
12	Dowels	1" X 8"	20.058	.70
	Bt. Spikes	$\frac{1}{2}$ " X 10"	26.0336	.87
	Nails	60°	30.0335	1.00
180	Washers	$\frac{3}{4}$ " X 4"	328.030	5.40
68	Spools S.H.	$7\frac{1}{2}$ "	326.083	5.64

Cost Material — 274.52

274.52

4 —

Height 16'—Length-60.5'—

51

TRIAL

AND COST

Total Amt.

Total
Amt.

\$ 274.52

Frt. 18.13t. AF. to Mayer

77.5 miles @ .017.

17.56

Labor — Carpenter — 53.25

Excavation — 35.50

Teaming — 42.57 131.32

Total Cost — \$ 423.40

Cost per lin. ft. — \$ 7.17 8.29

497.20

Cost of Carp. per M. \$ 4.92 ON.

Note — See note on Page 2

49.72

Bv 1/6
Bm R

58108

73.964

9,999,926.04

OP

507.12*

4.80

4.52

BRIDGE #25-

Station 1212+10⁹ to 1212+98⁹⁰

Bent Station Grade Elev.

1	1212+10 ⁹	51.51.55
2	+25 ⁴⁰	52.06
3	+40 ¹⁵	52.57
4	+54 ⁹⁰	53.09
5	+69 ⁶⁵	53.60
6	+84 ⁴⁰	54.12
7	1212+98 ⁹⁰	51.54.63

217+47⁵ old = } P.S. 6x15
1212+53.7 new }

Mile 48.95 from P&E Jct.
TRESTLE —

BRIDGE #25-

BILL OF MATERIAL

Mtl.	Size	L	B.M.	Kind	Rate	Amount	Total Amt.
	6X12		1248	R.W.	22.20	73.11	
	12X12		1440	"	"		
	12X12		3552	O.P.	22.70		
	12X14		1322	"	"		
	3X10		910	"	"		
	7X16	30	5040	"	"		
	6X8	9	2326	"	"	333.46	
	6X6	16	672	"	"		
	6X8	16	768	"	"		
	3X12		132	N.P.	16.60		
	2X12		24	"	"	2.59	409.16

Iron Ps Kind ¹⁷⁵³⁴¹ 175341 Wt. Rate Amt.

20	Drifts	$\frac{3}{4}$ X20"	56	.07	1.40
43	Bolts	$\frac{3}{4}$ X18"	111	.097	4.17
3	"	-X21"	9	.11	.33
50	"	$\frac{5}{8}$ X33"	155	.11	5.50
36	"	$\frac{3}{4}$ X27"	140	.154	5.54
20	Dowels	1"X8"	33	.058	1.16
	Bt. Spikes	$\frac{1}{2}$ X10"	39	.0336	1.44
	"	$\frac{3}{8}$ X8"	41		
	Nails	60 ^D	45	.0335	1.50
	Washers	$\frac{3}{4}$ X3"	265	.03	7.95
100	Spools S.H.	$\frac{3}{4}$ X $\frac{1}{2}$ "	480	.083	8.30

Store House 1.8% 8.03

Cost Material — 454.48

5-

Height 24' - Length 89.6'

53

4- AND COST

1 Amt.

Total
Amt.~~\$~~ 454.48

Frt. 29.66t. A.F. to Mayer

77 miles @ .01 $\frac{1}{4}$ ton mile

28.53

Labor — Carpenter — 85.75

Excavation — 34.50

Teaming — 86.40

206.65

Total Cost — ~~\$~~ 689.66

801.26

Cost per lin. ft. — ~~\$~~ 7.79 ^{8.90}Cost of Carp. per M. \$4.89 *OK**note - See note on Page 2*

9.16

29

03

78





Mile 48.95 from P+E Jct.
FRAME TRESTLE -

BRIDGE #25A -

BILL OF MATERIAL AND

Mtl.	Size	L	B.M.	Kind	Rate	Amount	Total Amt
Lumber	6X12	12	72	P.W.	22.20	19.09	
	3X12	210	630	"	"		
	12X12	144	1728	O.P.	22.70	40.65	
	3X10	25	63	"	"		
	2X12	7	14	N.P.	16.60	4.75	
	3X12	48	144	"	"		
Ties	6X8	32	128	"	"		
			2729				64.49

Iron	Ps.	Kind	Wt.	Rate	Amt.
10	Bolts	$\frac{3}{4}$ " X 18"	26	.097	.97
10	Dowels	1" X 8"	18	.058	.58
	Bt. Spikes	$\frac{3}{8}$ " X 8"	3	.0335	.30
	Nails	60D	6		
					1.85

Store House Charge $2\frac{1}{2}\%$ 1.65

Cost Material — \$67.99

Frt. 4.54 tons A.F. to Mayer

77 miles @ .014 ton mile — 4.37

Labor - Teaming — 6.35

Carpenter — 10.87 17.22

Total Cost — \$89.58

Cost per lin. ft. — \$11.19 / 13.41 120.74

Cost of Carp. per M. \$3.90 OK

Note See note on Page 2

5" A" -

Height - 2.5' - Length - 9' -

55

IAL AND COST

Total
Amt.

64.49

1.85

1.65

2.99

7.37

7.22

3.58

74

BRIDGE #26-

Station 1304+34⁹ to 1307+14⁴⁵

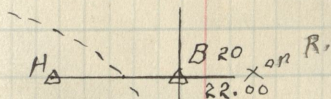
Bent Station Elev. Grade Elev. Ground Elev.

1	1304+34 ⁹	5709.95	09.95
2	+49 ³	10.46	04.4
3	+67 ⁰⁵	10.97	95.2
4	+78 ⁸⁰	11.49	86.7
5	+93 ⁵⁵	12.00	82.2
6	1305+08 ³⁰	12.52	77.8
7	+23 ⁰⁵	13.04	70.7
8	+37 ⁸⁰	13.55	64.6
9	+52 ⁵⁵	14.07	59.7
10	+67 ³⁰	14.59	51.9
11	+82 ⁰⁵	15.10	47.3
12	+96 ⁸⁰	15.62	52.2
13	1306+11 ⁵⁵	16.14	57.2
14	+36 ³⁰	16.65	62.4
15	+41 ⁰⁵	17.17	70.8
16	+55 ⁸⁰	17.68	90.0
17	+70 ⁵⁵	18.20	87.4
18	+85 ³⁰	18.72	99.2
19	1307+00 ⁰⁵	19.23	12.70
20	+14 ⁴⁵	5419.74	19.74

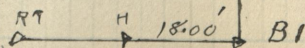
B.M. on Oak Tree 40' $\left\{ \begin{array}{l} R 1307 + 10 \text{ new} \\ L 167 + 15 \end{array} \right\} = 5419.69$

B.M. 5421.38 on Rock near B20

B.M. 5353.65 on Rock L Bent 9



C line



Mile 50.71 from P+E Jct.
TRESTLE—

BRIDGE #26—

BILL OF MATERIAL

Mtl.	Size	Lnft.	B.M.	Kind	Rate	Amount	Total Amt.	
Be Timber	6X12	608	3648	R.W.	22.20	300.29		
	12X12	616	7392	"	"			
	12X12	3385	40620	O.P.	22.70			
	12X14	280	3920	"	"	2087.24		
	3X10	4167	10418	"	"			
	2X10	388	647	"	"			
	2X16	1710	15960	"	"			
	6X8-9	1872	7988	"	"			
	6X6-16	608	1824	"	"			
	6X8-16	2768	11072	"	"			10.66
	3X12	208	624	N.P.	16.60			
	2X12	9	18	"	"			
	1X12-16	67	67	N.P.	16.60	5.05		
	2X12-16	48	96	"	"			
	3X12-16	48	114	"	"			
Iron	P3						2403.24	

2403.24

Iron Ps.	Kind	Wt.	Rate	Amt.
150	Drifts $\frac{3}{4}$ " x 20"	420	.07	10.50
430	Bolts — x 18"	1118	.097	41.71
122	" $\frac{3}{4}$ " x 21"	366	.11	13.77
154	" $\frac{5}{8}$ " x 33"	467	.11	16.91
121	" $\frac{3}{4}$ " x 29"	471	.154	18.60
150	Dowels 1" x 8"	242	.058	8.20
	Bt. Spikes $\frac{1}{2}$ " x 10"	350		
	" " $\frac{3}{8}$ " x 8"	175	.0336	24.69
	Nails 60°	210		

134.55

MATERIAL AND COST

Total Amt.	Mtl.	Pcs.	Kind	Wt.	Rate	Amt	Total Amt.
						134.55	2403.24
	Iron	1698	Washers $\frac{3}{4} \times 3"$	2310	.03	50.94	
		308	Spools $4\frac{1}{2}"$	1479	.083	25.56	211.05
			Store House Chgs. $2\frac{1}{2}\%$				65.13
			Cost Material -				2679.42
			Fr. A.F. to Mayer				
			185.12 tons @ .77				143.07
	Labor		Excavation			88.50	
			Teaming			339.52	
			Carpenter			689.30	1117.32
			Total Cost -				\$3939.81
			Cost per lin. ft. -			\$13.92 15.29	4282.44
			Cost of Carp. per M. -			\$6.35	OK

Note - See note on Page 2

2403.24



BRIDGE #27—

ON TANG.

Station 1438+66 to 1439+54²⁵

Bent	Station	Grade	Elev.
1	1438+66	57	13.38
2	+80 ⁵		13.83
3	+95 ²⁵		14.29
4	1439+10 ⁰⁰		14.74
5	+24 ⁷⁵		15.20
6	+39 ⁵⁰		15.65
7	+54 ²⁵	57	16.10

16.

54²⁵

58



Mile 53.26 from P+E Jct.
TRESTLE -

BRIDGE 27

BILL OF MATERIAL

Mtl.	Size	ft.	B.M.	Kind	Rate	Amount	Total Amt
Timber	4X12	1024	R.W.	22.20	}	85.95	
	3X12	288	"	"			
	12X12	1848	"	"			
	12X14	1372	O.P.	22.20	}	423.76	
	12X12	5640	"	"			
	7X16	5040	"	"			
	6X8	4984	"	"			
	6X6	672	"	"			
	3X10	960	"	"	}		
	3X12	384	N.P.	16.60		2.53	512.24

Iron Ps	Kind	Wt.	Rate	Amt.
34 Drifts	$\frac{3}{4}$ " x 20"	95	.07	2.38
80 Bolts	$\frac{5}{8}$ " x 33"	248	.11	8.80
24 Dowels	1" x 8"	55	.061	1.46
20 Bolts	$\frac{3}{4}$ " x 21"	60	.106	2.12
42 "	$\frac{3}{4}$ " x 29"	167	.154	6.47
60 "	$\frac{3}{4}$ " x 18"	156	.093	5.58
420 Washers	$\frac{3}{4}$ " x 3"	588	.03	12.60
120 Spools	4 $\frac{1}{2}$ "	576	.083	9.96
Bt. Spikes	$\frac{1}{2}$ " x 10"	100	.036	3.60

Store House % 519.13

Cost Material - 579.34

Frt. A.F. to Saddle 39.9 tons @ .98 39.10

618.44

Height 31' — Length 89.5'

59

AND COST

Total
Amt.

618.44

Labor — Teaming — 29.00

Hdlg. Mtl. — 28.12

Carpenter — 255.38

312.50

Total Cost — ~~\$930.94~~

1042.54

Cost per lin. ft. — ~~\$10.34~~ 11.58

Cost of Carp. per M. — \$11.50 OK.

Note — See note on Page 2



BRIDGE #28-

Station 1449+22' to 1450+06'¹⁰

Bent	Station	Grade Elev.	Ground Elev.
------	---------	-------------	--------------

1	1449+22'	45.08	38.5
2	+35'	45.45	38.3
3	+49 ⁸⁵	45.87	39.2
4	+64 ⁶⁰	46.29	39.7
5	+79 ³⁵	46.71	41.4
6	+94 ¹⁰	47.13	43.2
7	1450+06' ¹⁰	47.48	45.4

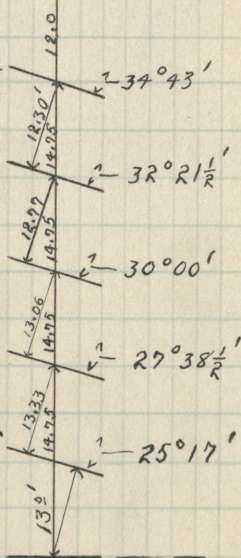
Poland Cr. 

Requires 1.56 Extra Dist.
outside stringer

Bent 2 to Bent 1 inside curve.

Requires 2.4 Extra Dist. to reach outside stringer. Bent 6 to 7 outside curve.

Radii Line



Bents skewed as per Sketch.

Mile 53.46 from P+E Jct.
TRESTLE

BRIDGE #28-

BILL OF MATERIAL AND COST

Mtl.	Size	Ft. B.M.	Kind	Rate	Amount	Total Amt.
Timber	4X12	960	R.W.	22.20	54.18	
	12X12	1032	"	"		
	12X14	1372	C.P.	22.20	264.00	
	6X8	3072	"	"		
	6X6	576	"	"		
	3X10	750	"	"		
	7X16	6160	"	"	12.28	
	12X12	1440	OPSH.	12.00		
	3X12	144	N.P.	16.60	2.39	337.85

Iron Ps.	Kind	Wt.	Rate	Amt.	
20	Drifts	$\frac{3}{4}$ X 20"	56 .07	1.40	
20	Dowels	1" X 8"	25 .061	1.22	
30	Bolts	$\frac{3}{4}$ X 18"	78 .093	2.99	
38	"	$\frac{3}{4}$ X 24"	148 .154	5.85	
50	"	$\frac{5}{8}$ X 33"	155 .11	5.50	
180	Washers	$\frac{3}{4}$ X 3"	540 .03	5.40	
100	Spools	4 $\frac{1}{2}$ "	830 .083	8.30	
	Bt. Spikes	$\frac{1}{2}$ X 10"	70 .036	2.52	
	Nails	60"	30 .0335	1.00	33.95

Store House % 9.30

Cost Material — 381.13

Frt. A.F. to Saddle 27.57 tons @ \$.98 — 27.02

Labor — Teaming — 9.63

Hd'g. Mtl. — 21.00

Carpenter — 123.12 153.25

Carried forward Total Cost — 561.95

#28-

Height 8' — Length 86'

61

RIAL AND COST

Total
Amt.

Total cost

\$668.56

Cost per lin. ft. — \$6.69

7.77

Cost of Carp. per M. — \$8.10 OK

Note — See note of Page 2



337.85

33.95

9.30

\$381.13

27.02

153.25

\$561.70

BRIDGE #29—

Station 1465+07⁶ to 1465+51⁶⁰

Bent	Station	Grade Elev.	Ground Elev.
------	---------	-------------	--------------

1	1465+07 ⁶	57 95.10	92.5
2	+22 ¹	95.56	90.1
3	+36 ⁸⁵	96.03	92.3
4	1465+51 ⁶⁰	57 96.49	90.9

{ 1465+89³ new
 { L7+15² P.C. 7°30'R



Mile 53.76 from P+E Jct.

TRESTLE

BRIDGE #29-

BILL OF MATERIAL

Mtl.	Size	Ft. BM.	Kind	Rate	Amount	Total Amt.
Timber	4X12	320	R.W.	22.20	26.98	
	3X12	288	"	"		
	12X12	384	"	"		
	12X14	784	O.P.	22.70		
30" x 12						

Iron Ps	Kind	Wt.	Rate	Amt.
8	Drifts	$\frac{3}{4}$ X 20"	23 .07	.56
8	Dowels	1" X 8"	10 .061	.49
26	Bolts	$\frac{5}{8}$ X 33"	25 .11	2.86
12	"	$\frac{3}{4}$ X 18"	31 .093	1.12
10	"	$\frac{3}{4}$ X 28"	39 .154	1.54
50	Washers	$\frac{3}{4}$ X 3"	70 .03	1.50
52	Spools	4 $\frac{1}{2}$ "	250 .083	4.32
	Bt. Spikes	$\frac{1}{2}$ X 10"	40 .036	1.44
	Nails	60°	20 .0335	.67

Store House % 4.13

Cost Material — \$169.52

Frt. A.F. to Saddle 11.7 tons @ \$.98 — 11.47

Labor — Cribbing — 3.50

Hdlg. Mtl. — 10.00

Carpenter — 38.87 52.37

Carried forward. Total Cost — \$233.36

29-
FRIAL

Height - 7' - Length - 45.9'

63

AND COST

Total
Amt.

Total Cost 289.89

Cost per lin. ft. — \$ ~~5.18~~ 6.30

Cost of Carp. per M — \$5.95 OK.

Note - See note on Page 2



150.89

17.50

4.13

\$169.52

11.47

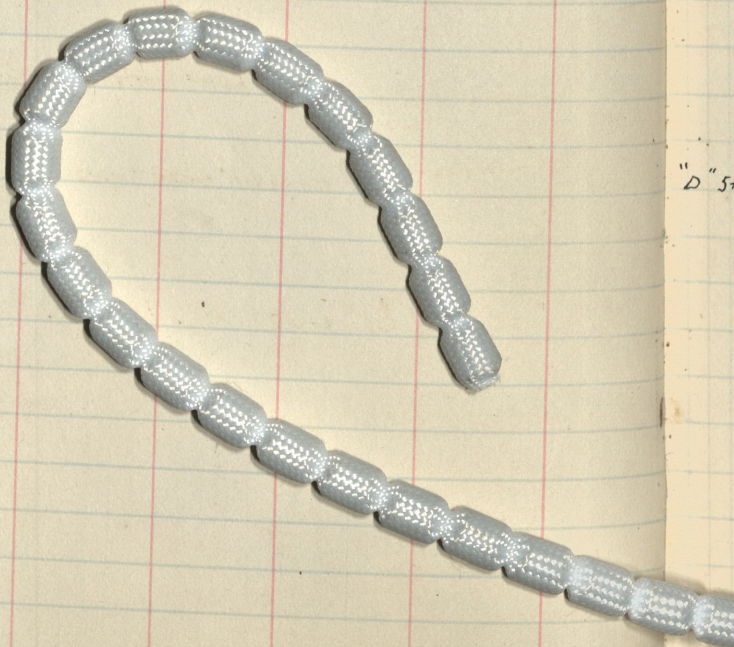
52.37

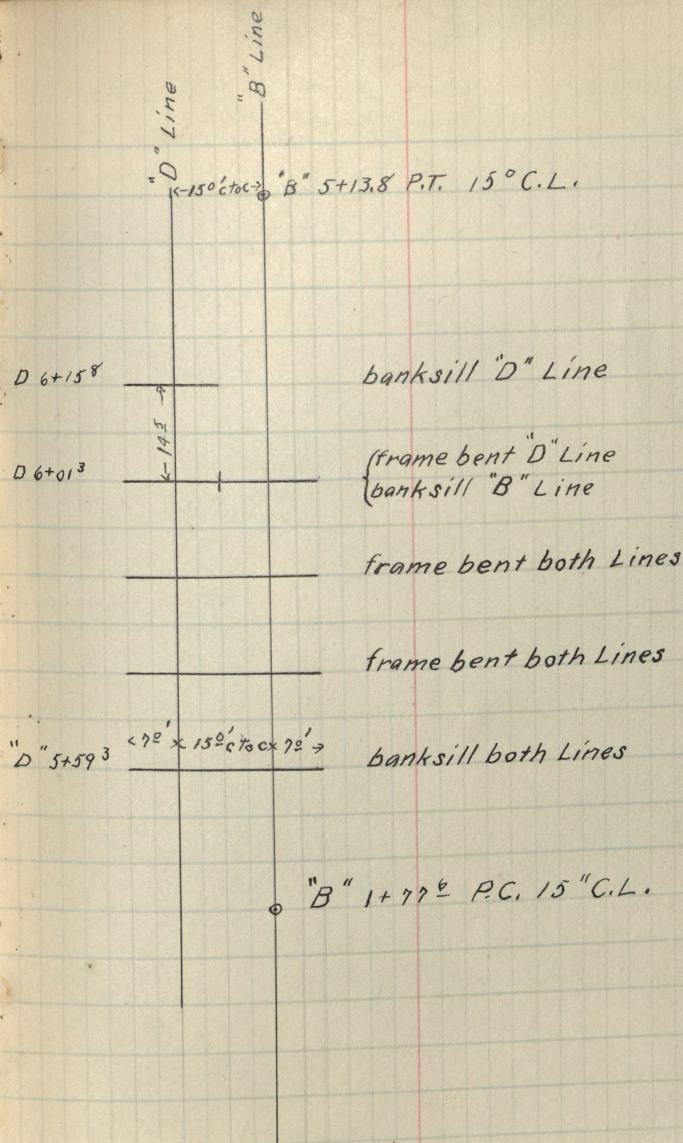
233.36

BRIDGE #30-

Station 1477+92³ to 1478+36⁹⁵

Bent	Station	Grade Elev.	Ground Elev.	B. Line D. Line
1	1477+92 ³	58.07	58.0	03.2 06.0
2	1478+06 ⁸	08.10	09.0	04.4
3	+21 ⁵⁵	08.41	03.2	04.2
4	+36 ⁹⁵	08.71	06.0	05.1
5		09.01		58.06.0





1 Mile 53.97 from P & E Jct.
TRESTLE

BRIDGE #30-

BILL OF MATERIAL

35 Nov 12 30

Mtl.	Size	Ft.	B.M.	Kind	Rate	Amount	Total Amt.	
Timber	3X12	576	R.W.	22.20	}	31.33		
	12X12	576	"	"				
	12X14	784	O.P.	22.20	}	118.04		
	7X16	2520	"	"				
	6X8	1608	"	"				
	6X6	288	"	"				
	12X12	576	O.P.S.H.	12.00	6.91			
	3X12	240	N.P.	16.60	}	34.53		
Planking	2X12 -16	1600	"	"				
	2X6 -16	240	"	"			190.81	

2008

Iron Ps.	Kind	Wt.	Rate	Amt.
16	Drifts	$\frac{3}{4}$ " X 20"	45.07	1.12
16	Dowels	1" X 8"	20.061	.98
15	Bolts	$\frac{3}{4}$ " X 18"	39.093	1.40
24	"	$\frac{5}{8}$ " X 33"	75.11	2.64
22	"	$\frac{3}{4}$ " X 29"	85.154	3.39
80	Washers	$\frac{3}{4}$ " X 3"	197.03	2.40
48	Spools	4 $\frac{1}{2}$ "	230.083	3.98
	Nails	60°	20.0335	2.34

Store House % 4.34

Cost Material - \$213.40

Frt. A.F. to Saddle 12.85 t. @ \$.98 12.59

2.9 t. @ \$1.05 3.05

Labor - Hdng. Mtl. - 10.25

Carpenter - 58.58 ✓ 68.83

Carried fwd. Total Cost - \$297.87

#30-

Height-4.5' — Length-45.8'

65

RIAL

AND COST

Total
Amt.

Total Cost

354.40

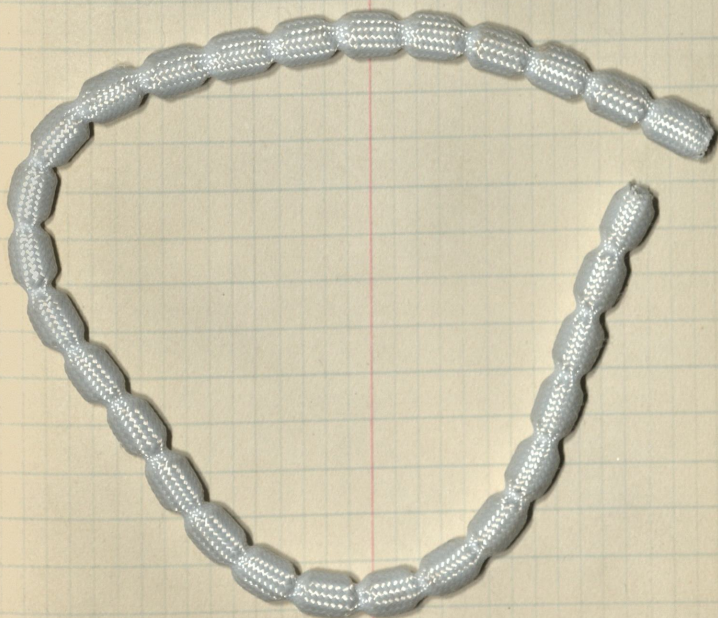
Cost per lin. ft. — ~~\$6.62~~

7.70

Cost of Carp. per M — ~~\$6.49~~ OK.

Note — See note on Page 2

190.81



18.25

9.34

213.40

12.59

3.05

68.83

297.87

BRIDGE #31 - Height 5'
Mile 53.97 from P+E Jct. Length 57.4'

This bridge with bridge #30
is a double one. For sketch
and other data see page 64.

4'
e #30
ch
54.

Mile 53.97 from P+E dct.
TRESTLE

BRIDGE #31-

BILL OF MATERIAL

Mtl.	Pcs.	Size	Ft.	B.M.	Kind	Rate	Amount	Total Amt.
Timber		3X12	432	R.W.	22.20		37.86	
		12X12	960	"	"			
		12X14	980	O.P.	22.70			
		6X8	2024	"	"		153.18	
		7X16	3360	"	"			
		6X6	384	"	"			
		3X12	384	N.P.	16.60			
Plank	60	2X12-16	1920	"	"		46.37	
	20	2X6-16	320	"	"			
	14	3X6-8	168	"	"			237.41

Iron	Pcs.	Kind	Wt.	Rate	Amt.	
12	Drifts	$\frac{3}{4}$ " x 20"	34	.07	.84	
12	Dowels	1" x 8"	15	.061	.73	
30	Bolts	$\frac{5}{8}$ " x 33"	93	.11	3.30	
18	"	$\frac{3}{4}$ " x 18"	47	.083	1.67	
25	"	$\frac{3}{4}$ " x 28"	97	.154	3.80	
150	Washers	$\frac{3}{4}$ " x 3"	210	.03	4.50	
60	Spools	4 $\frac{1}{2}$ "	288	.083	4.98	
	Nails	60°	70	.0335	2.34	
	Bt. Spikes	$\frac{1}{2}$ " x 10"	45	.036	1.72	23.88

Store House % 5.16

Cost Material \$266.45

Frt. A.F. to Saddle 15.3t. @ \$.98 14.99

3.7t. @ 1.05 3.89

\$285.33

31-

AL

Total
Amt.

Height - 4.5' - Length - 57.8'

67

AND COSTTotal
Amt.~~285.33~~

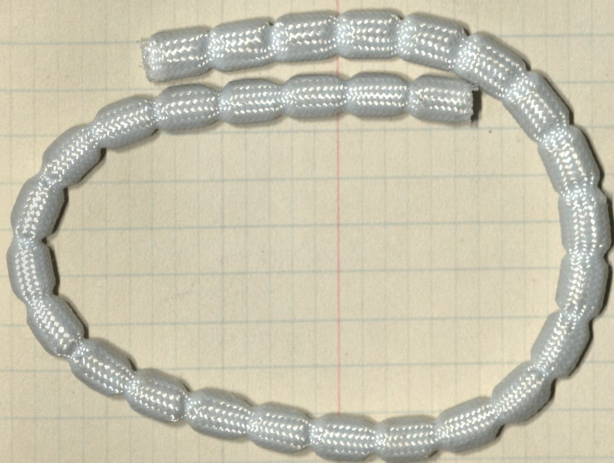
Labor - Hdlg. Mtl. — 13.00

Carpenter — 71.75

84.75

Total Cost — ~~390.08~~Cost per lin. ft. — ~~6.38~~ 7.61 441.42Cost of Carp. per M. — ~~6.83~~ OK*Note - See note on Page 2*

237.41



23.88

5.16

266.45

14.99

3.89

285.33

M.P. 31+08

Bulkhead Trestle.

BRIDGE #2A

BILL OF MATERIAL & COST

Mtl.	Ps.	Size	Ft. B.M.	Kind	Rate	Amount	Total Amount
Timber	2	12x14-14	392	O.P.	18.00	11.66	
	4	6x8-16	256	"	"		
	6	7x15-12	630	"2nd.	6.00	15.80	
	9	6x8-9'	324	"	"		
	6	7x16-30	1680	"	"		
							27.46

Iron	PS.	Kind	Wt	Rate	Amnt.	
	8	Bolts	$\frac{3}{4}$ " x 36"	36	.11	.88
	6	"	$\frac{3}{4}$ " x 24"	18	.06	.36
	16	4" Spools	48	.13	2.08	3.32

Cement 61

56 34.16 34.16

104

S.H. 584

Total 70.78

68.00 yds Concrete

PA

IAL & COST.

tal Amount.

Height 6.6 - Length - 12'

68

Built Feb. 1912.

27.46

332

34.16

584

70.78

Levels across Ravine Bridge 8
after Fire June 16-1919

M					
Tie	Top Tie Sta 4+25			71.65	
	B.M.	0.19	71.84	61.5	65.69
	B.11			44.0	67.44
	" 10	0.55	60.55	11.84	62.00
	" 9			97.5	50.80
I	T.P.	0.11	47.70	129.6	47.59
	# 8			6.25	41.45
	# 7			12.74	34.96
	B.M.			11.25	26.45
C	# 6			13.80	30.90
	# 6			11.14	36.56
	# 5			13.48	24.22
	# 5			12.42	35.28
	# 4			3.68	44.02
	# 4			3.41	44.29
	T.P.	13.00	60.31	0.39	47.31
	# 3			7.25	53.06
	T.P.	12.53	72.46	0.38	59.93
	# 2			9.85	62.61
	# 1	10.45	81.03	1.88	70.58
	440 x 529 Top Tie			4.28	76.75
	B.M.			1.03	80.00



See page 18
for original
notes and
notes at time
staked out
after fire
June 16-1919

126
86
1348

m R Hub

" " "
" " "
" " "

on Center Pin

on Ref Pin 30' R PCC

Bottom old fill

on Hub R #6

Top Mud block left end

" " " R "

Ground on R end

on Hub 14.7 R of Center

Hub 2 1/2 feet ahead of Center

Hub Left

" "

Nail in Telegraph pole 50' R Hub

Bridge 8-BM.RR

	Bent.	Height Top Mud Block to top of tie
M	1	5.46
Time	2	13.01
	3	22.15
	4	30.38
	5	40.47
Iron	6	40.08
	7	39.61
	8	31.92
	9	23.98
Ce	10	14.99
	11	4.56

6



M
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Time To

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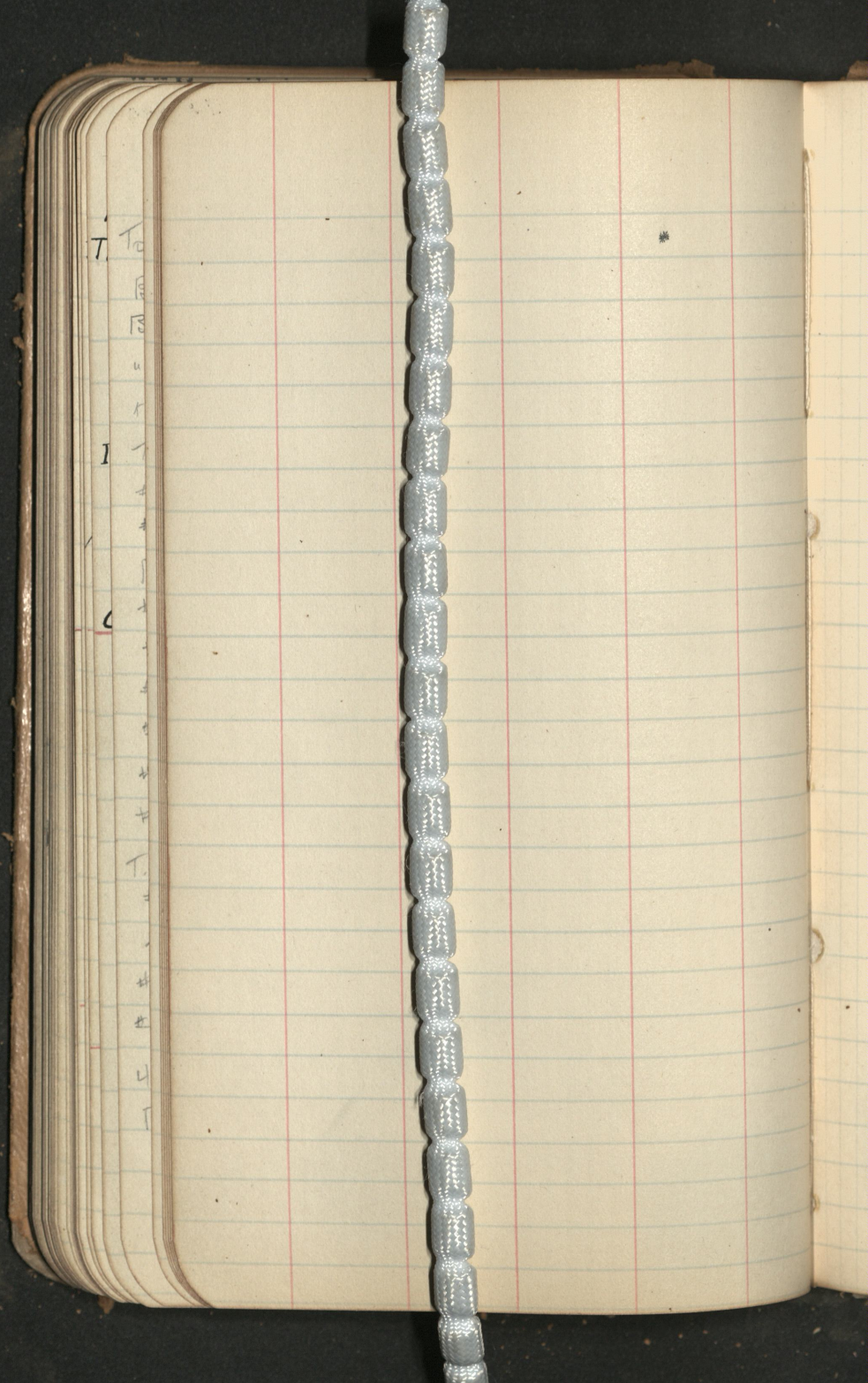
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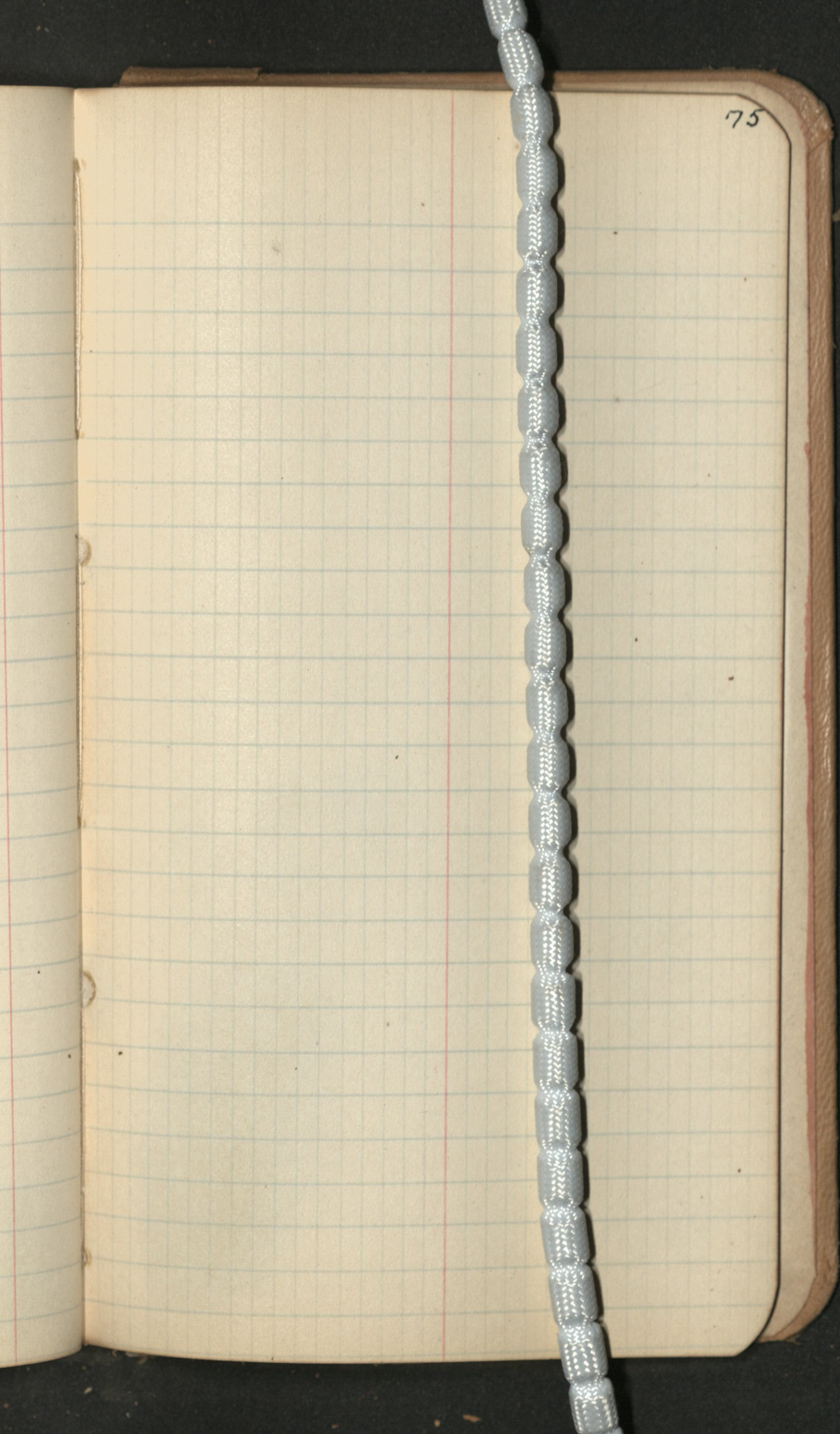
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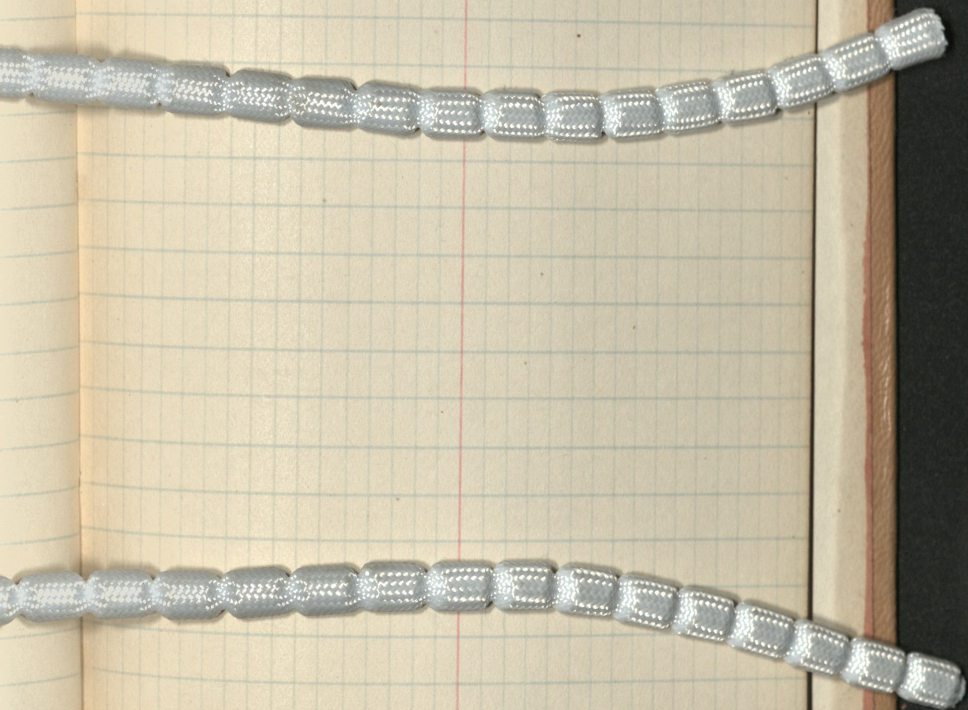
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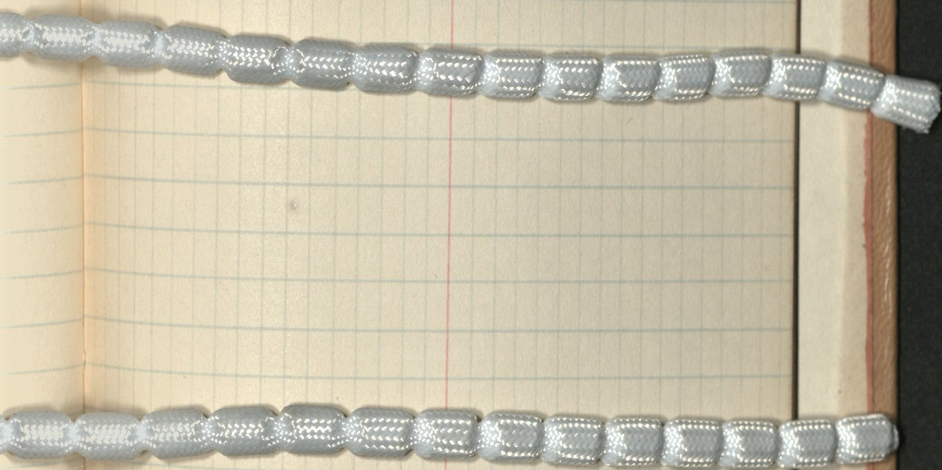


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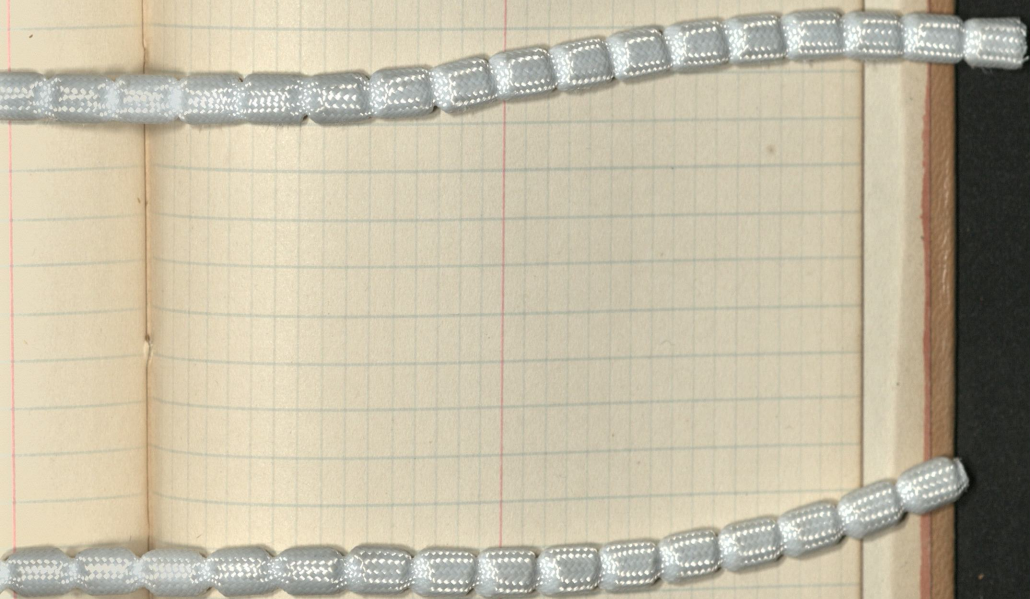




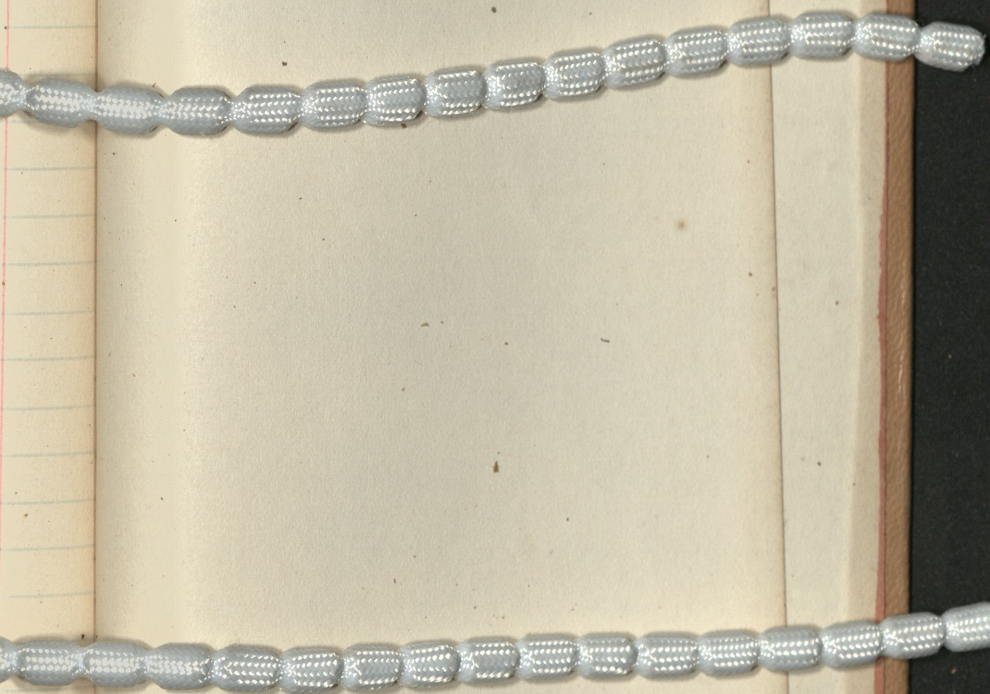


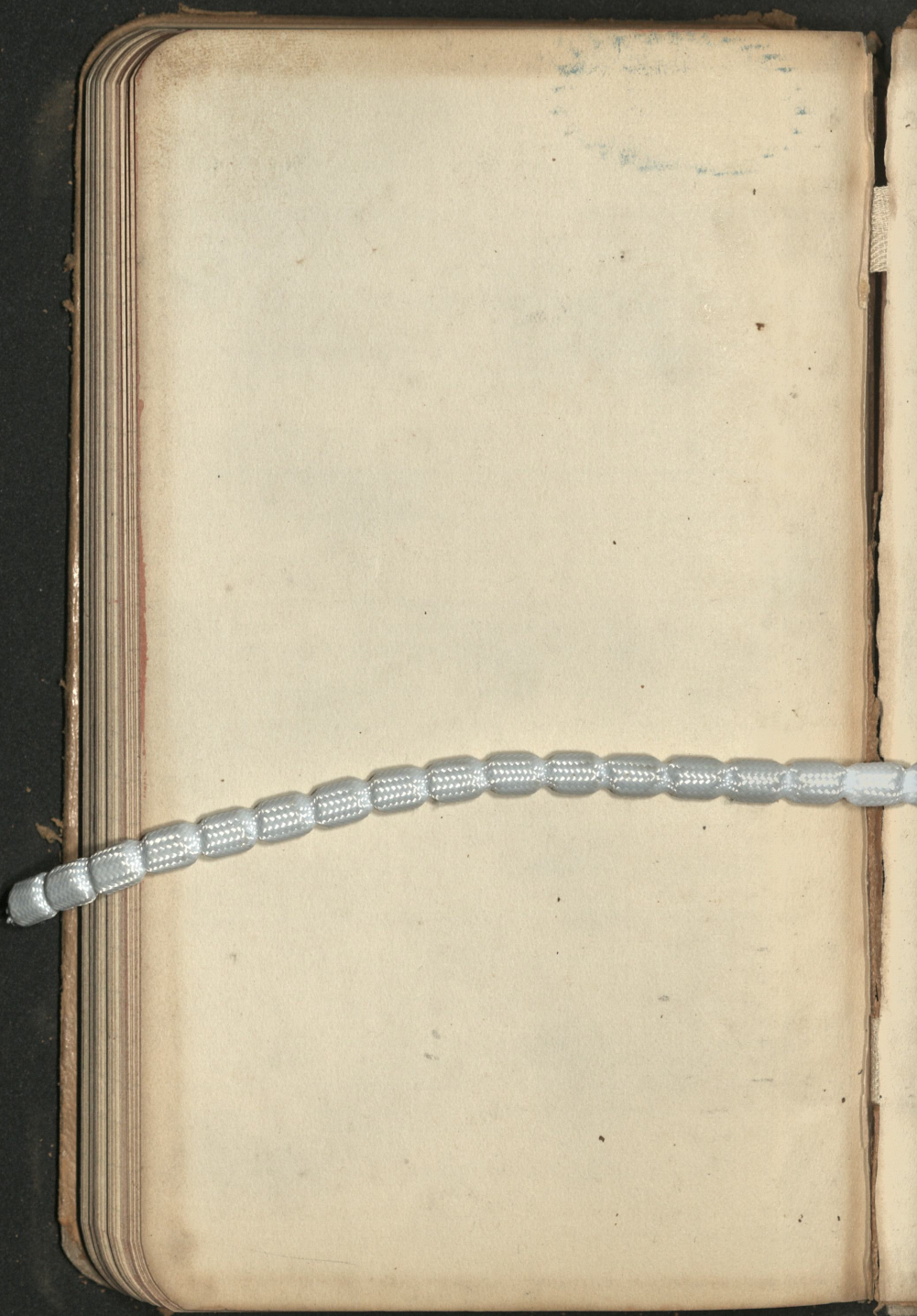














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